Vol. XXVII. Part 12.

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The Journal of the Department of Agriculture of Victoria, Australia.

Dec., 1929.

PRINCIPAL CONTENTS

Results of Potato Manurial Trials, 1928-29

Preparing of Poultry for Market

Dairy Breeds and their Characteristics

Current Orchard Work

Standard Herd Records—September Quarter

Dairy Products—Reduction in Cost of Production More Important than Question of Markets

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OF

THE DEPARTMENT OF AGRICULTURE,

VICTORIA, AUSTRALIA.

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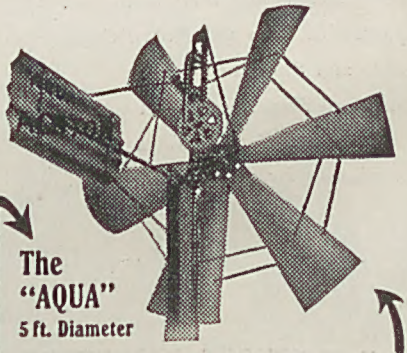

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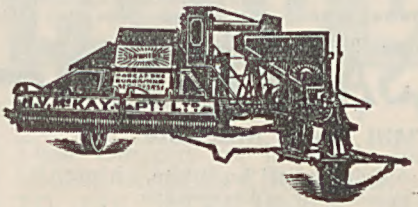

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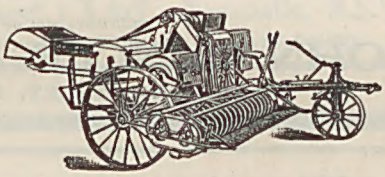

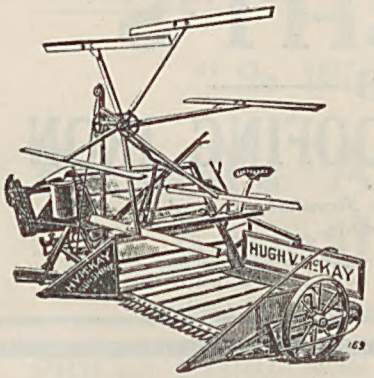

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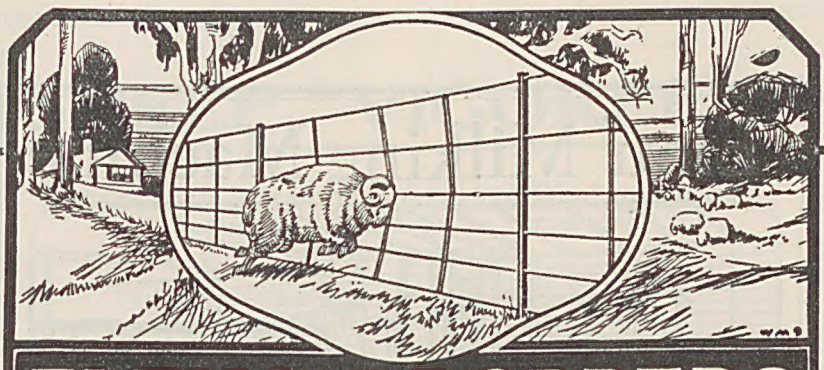

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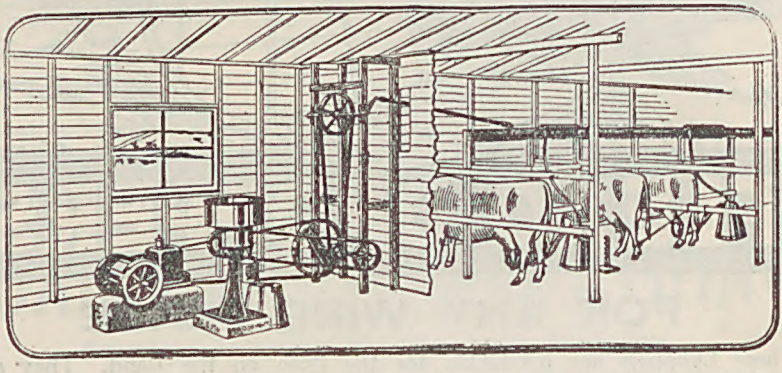

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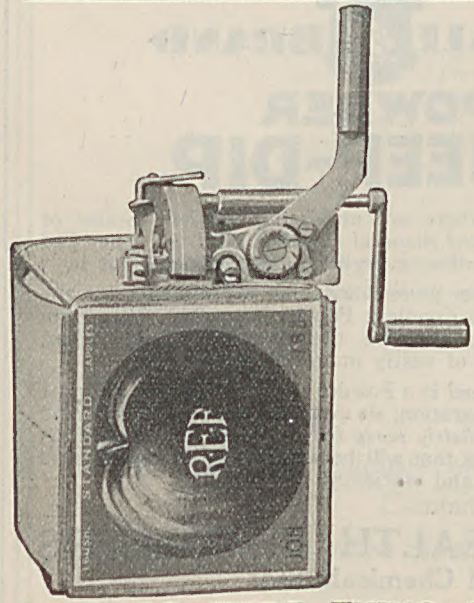

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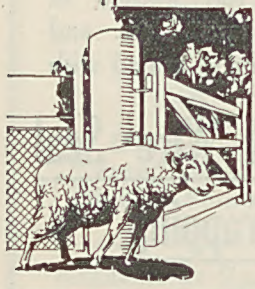

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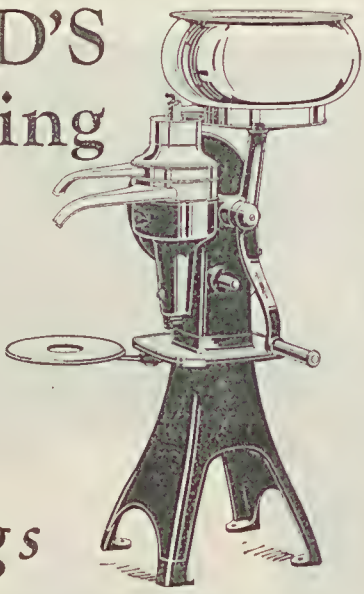

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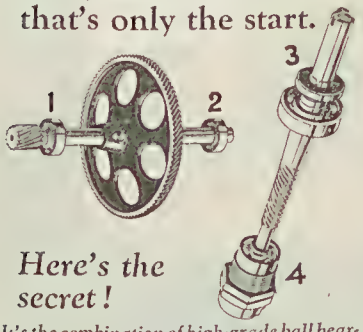

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THE JOURNAL

OF THE

Department of Agriculture

OF

VICTORIA.

Vol. XXVII. December, 1929. Part 12

DAIRY PRODUCTS.

REDUCTION IN COST OF PRODUCTION MORE IMPORTANT THAN QUESTION OF MARKETS.

(Extracts from a Wireless Talk by Mr. R. Crowe, Exports Superintendent.)

In my opinion the three essential requirements to improve the position of those engaged in the dairying industry are, first, and by a long way the most important, a reduction in the cost of production; second, an improvement in the quality of butter; thirdly, and least in importance, is marketing.

Good Quality Ensures Highest Market Price.

If a firm in Melbourne were entrusted with the disposal of the output of twenty butter factories, each consistently producing butter of the highest standard of quality, and this level were regularly maintained, retailers and consumers would soon become aware of the dependability of such butter, and there would be no difficulty in securing for it the highest market rates. The only concern of the sales manager would be to select daily orders, for these would be sure to be in excess of his capacity to supply. There is at present no firm in this happy position.

The butter usually handled varies in quality, and in order to please customers considerable trouble and anxiety are experienced. Poor quality butter, as well as butter, no matter from what source, which varies in quality from week to week, requires the greatest effort if it is to be disposed of at a satisfactory price. It is evident, therefore, that quality is of greater importance and should receive a great deal more attention than is given to *marketing*.

I have not come to this conclusion without reason. I remember a factory which, a long time ago, dominated for some years the market price for butter. After its reputation for quality had been thoroughly

established, regular customers insisted upon being supplied with their full quota twice a week. When the season began to decline, and there were a few boxes short, each one literally fought for his full weekly complement. The only way in which the agent could resist the demands made on him was to increase the price. In a fortnight a further decline in output was experienced, and the price was again advanced for the same reason. This happened when there were still over 200 tons of butter being exported from other factories, so that export parity, under those circumstances, did not regulate the local market. In time, it became the rule for most Melbourne agents to delay naming the price of butter handled by them on each of the two sale days per week until they first ascertained the price the agent for this particular brand had secured. The manager of the factory left to take up another position, and the goodwill which had been won was soon lost, because of irregularity in quality manifesting itself. The leading position was seized by another factory, which enjoyed pre-eminence for a number of years, but after the death of the manager its reputation declined for the same reason as indicated in the first instance—regularity in quality was not maintained.

Some people are of opinion that we should try to find new markets. It is not generally known that, during the last year, Victorian butter has found its way to over 80 ports or destinations in all parts of the world. The great bulk of the butter exported goes to the United Kingdom, and the next best customers are Java and Eastern ports.

Price Fixed According to that Offering in London Market.

Prices in all parts of the world bear a relationship to the London market. If, as the result of inquiries from any other country, a Melbourne shipper quoted a price higher than that at which butter could be procured from London, there would be no sale. Victorian exporters are not philanthropists. They will not consign butter to China or Japan for the sole purpose of extending markets. They will fulfil orders from these countries provided that the price is, at least, as good as that obtainable through the regular export trade channels. The butter they have to dispose of is sent to those destinations from day to day, and from week to week, from which the highest net price is assured.

The market in the United Kingdom is a competitive one, and depends upon the purchasing power of the consumers and the price at which these consumers can procure substitutes. Our butter has to compete with that from the Argentine and from European and other countries, and, provided that the full market prices—according to quality—are obtained in competition with other butters, I cannot see how any organization can improve matters. The main heading under which higher prices can be secured is *improvement in quality.*

The Paterson Scheme.

There is one organization, namely, the Stabilization Committee (or the Paterson scheme) which ensures a higher price for butter marketed in Australia. It is believed that this scheme secures to dairymen as high a price above export parity as it is safe to ask. To attempt to develop it any further, under present conditions, may be harmful, as it

is almost certain that such a step would bring about a reduction in consumption. The higher level of prices maintained by further organization in Queensland has resulted in reduced consumption.

Dairymen producing milk for local consumption enjoy greater advantages under the Paterson scheme than those supplying butter factories. The price of milk for sale within the metropolitan area and for consumption throughout Victoria has a relationship to, and is dependent upon its value for delivery to a butter factory. The factories have to contribute to a fund an amount on every pound of butter manufactured, in order to make the scheme effective. That contribution has to be deducted from the total gain. The seller of milk for human consumption does not contribute anything, and, therefore, enjoys benefits to a greater extent than do suppliers to a factory.

How Cost of Production can be Reduced.

Now, if the production side of the subject is considered, it will be seen that greater benefits are possible than under the heading of either quality or marketing. The value of milk and milk products produced in Victoria last year was £11,500,000. It is known that the average yield of cows in Victoria can be very materially increased without a corresponding advance in the cost of production; in other words, *the cost of production can be thus reduced.* This has already been proved in many instances in connexion with herd-testing; by culling out unprofitable cows; by improving the breed; by improving pastures; by the subdivision of dairy farms, and by the growing and conservation of fodder. One would be safe in saying that, with the general adoption of herd-testing and the improved developments arising therefrom, it would be possible to increase the average yield from cows within the State by 50 per cent. Of course, it would take a long while to accomplish such a result, but it could be done within ten years. At the end of that time the value of milk products would have increased by £5,750,000—or a progressive gain at the rate of £575,000 yearly. That this is a possibility has been suggested by the results already obtained in various parts of Victoria from improvements that have followed on herd testing. Some seven years ago in California, wherein the number of cows is approximately the same as the number in Victoria, an attempt to improve the yield from the dairying industry by 50 per cent. was resolved on. By consistent propaganda results ahead of expectations have been achieved, and it seems to be certain that the objective will be attained well within ten years.

I strongly recommend that those concerned should give most of their attention to the supplementing of efforts already in existence *to reduce the costs of production;* next to that, *improvement in quality;* any spare energy might be devoted to *marketing.*

This conclusion is supported by the experience of the Empire Marketing Board. This Board was constituted in May, 1926, upon the recommendation of the Imperial Economic Committee for "furthering the marketing in this Country [Great Britain] of Empire products." In 1926 His Majesty's Government voted £500,000, and in each year following £1,000,000, for this purpose. As the grant is non-surrenderable, the income not spent in any year can be reserved for employment in future years.

As it took the Board some time to function after its constitution in May, 1926, and the financial year ended on the 31st of March, 1927, the whole vote was not utilized. However, about three-quarters of the expenditure incurred was in connexion with publicity and propaganda for marketing. Upon taking stock of their efforts when the first year ended, the policy was altered, and grants now made are mainly for the purpose of scientific research into problems of production, and other phases of the Board's work have become subsidiary.

The efforts of the Butter Export Control Board have been somewhat similar. This Board was not functioning long before the London representatives pointed out the absolute necessity for *improvement in quality.*

RESULTS OF POTATO MANURIAL TRIALS, 1928-29.

(Continued from page 678.)

By J. T. Ramsay, Potato Expert.

Millbrook.

The results of the potato trials at Millbrook last season were disappointing. Adverse weather conditions operated with a damaging effect on the crop. The whole of the tests were cut back by a severe frost in February, and this was followed by a fairly severe attack by Early Blight (*Alternaria Solani*), which further curtailed the yield to such a degree that very light cribs resulted.

In the manure trials (Table I.) the dressing of 3 cwt. super. per acre has shown up best, but on account of the damage done by the two agents mentioned, no stress can be put on the results. The varietal trials (Table II.) show that the coloured varieties are better able to resist adverse conditions than are the white.

Considerable benefit is shown from proper seed storage methods, as will be seen from Table III., where the figures from boxed and bagged seed are compared. The increase in favour of boxed seed, even in this season of poor crops, shows a considerable percentage profit over the whole cost of the boxes being charged to the one crop, which, of course, should not be done.

The cultivation tests were satisfactory and gave substantial increases for each horse hoeing (Table IV.).

Rainfall at Millbrook, 1928–29.

November, 1928	70	points.
December, 1928	63	,,
January, 1929	118	,,
February, 1929	119	,,
March, 1929	167	,,
April, 1929	181	,,
May, 1929	129	,,
	847	,,

Table I.—Result of Manurial Trials at Millbrook.
Conducted on farm of Mr. P. J. Ryan.—Red soil, volcanic loam.

Plot.	Treatment.	Yield. T. c. q.
1	2 cwt. super. p.a.	1 5 2
2	3 cwt. super.	1 13 2
3	4 cwt. super.	1 8 0
4	3 cwt. super., 1 cwt. sulph. ammon.	1 12 0
5	No manure	1 1 1
6	6 cwt. super., 1 cwt. sulph. ammon.	1 6 2
7	6 cwt. super., 1 each pot. sulph and ammon. sulph.	1 6 2
8	3 cwt. market garden manure	1 8 0
9	3 cwt. basic super.	1 4 0

Table II.—Varietal Trials.
(3 cwt. super. per acre.)

Variety.	Yield. T. c. q.
No. 1 Carman	0 13 2
Beauty of Hebron (early)	0 14 0
Earliest of all	1 2 0
Kerr's Pink	0 10 3
Manhattan	4 0 1
Brown's River	3 4 1
Wellington	1 17 2
Late Manistee	3 9 2
Great Scott	2 13 2
Minato	4 5 3
Beauty of Hebron (late)	2 3 0
Brownell's Beauty	2 3 0
Excelsior	2 8 1
Sussex	1 6 3

Table III.—Bagged Seed *v.* Boxed Seed Test.

	Yield. T. c. q.
Bagged seed	1 1 2
Boxed seed	2 3 0

A trial was made between imported seed and local seed, but as the figures (Table IV.) show, there was no difference in the yields.

Table IV.—Imported *v.* Local Seed.

	Yield. T. c. q.
Carman 3 (Beech Forest)	2 3 0
Carman 3, local	2 3 0

Table V.—Results of Cultivation Trials.

	Yield. T. c. q.
Carman 3, cultivated once	1 4 0
Carman 3, cultivated twice	1 17 2
Carman 3, cultivated thrice	2 3 0

Romsey.

The manure trials at Romsey were satisfactory in spite of the fact that no heavy yields were obtained. On this particular soil, the optimum quantity of super. per acre appears to be about 3 cwt., but further trials will be continued to determine this. However, the fact is established that manurial treatment of this soil is a profitable practice.

TABLE V.—RESULTS OF MANURE TRIALS ON POTATOES AT ROMSEY, 1928–29.

Conducted on the farm of Messrs. Spring Bros.—Soil: red volcanic.

Plot.	Manure per Acre.	Market Tubers.	Increase due to Manure.	Cost of Manure.	Cost per Ton Increase.	Increased Value per Acre.	Net Increased Value per Acre.	Percentage Increase.
		T. c. q.	T. c. q.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	%
1	2 cwt. super. ..	2 16 1	0 18 3	0 12 6	0 13 2	11 5 0	10 12 6	51
2	3 cwt. super. ..	3 1 2	1 4 0	0 18 9	0 16 9	14 8 0	13 9 3	64
3	4 cwt. super. ..	2 18 3	1 1 1	1 5 0	1 3 10	12 15 0	11 10 0	57
4	3 cwt. super., 1 cwt. sulph. ammon. ..	3 1 2	1 4 0	1 15 6	1 13 3	14 8 0	12 12 6	64
5	Nil	1 17 2	..	..	..	..	..	..
6	6 cwt. super., 1 cwt. sulph. ammon. ..	3 4 1	1 6 3	2 14 3	2 0 0	16 1 0	13 6 9	70
7	6 cwt. super., 1 cwt. sulph. ammon., 1 cwt. pot. sulph.	3 0 1	1 2 3	3 9 9	3 0 0	13 13 0	10 3 3	59
8	3 cwt. market garden manure ..	2 13 2	0 16 0	1 8 6	1 15 0	9 12 0	8 3 6	43
9	3 cwt. basic phos. ..	2 13 2	0 16 0	0 19 6	1 5 0	9 12 0	8 12 6	43

STALLION REGISTER, 1929-30.

Under the Horse Breeding Acts 1919-1925.

Part IV.*—Stallions in respect of which Certificates of Registration have been refused, but which, the owners having paid the prescribed fees, may be retained for breeding purposes with owners' own mares only. Registrations prior to 1st December, 1929.

Name.	Age.	Class.	Owner.	Address.
	Yrs.			
Basil More ..	4	Draught ..	W. Bilstein ..	Pirlta
Buchylyvie Again..	A	,, ..	J. H. and W. Oldfield	Nhill
Champion ..	A	,, ..	Mrs. B. Willmott ..	Trentham
Clyde	A	,, ..	C. Hebard ..	Bulart
Diamond's Comet ..	5	,, ..	H. Sunderman ..	Dawson
Donald ..	4	,, ..	Smart Bros. ..	Gooramadda
Earl Douglas ..	A	,, ..	A. V. and E. Baulch	Orford
King Cedric ..	A	,, ..	G. A. McNabb ..	Irrewillipe East
Nailstone Barossa ..	3	,, ..	O. McCabe ..	Underbool
Nugget II. ..	A	,, ..	G. Lord	Eskdale
November ..	A	Light	Ramage and Mason	Violet Town
Ondit	A	Draught ..	Exors. N. Thornley	Hawkesdale
Paul	4	,, ..	D. A. Zippel ..	Wonwondah East
Repeater's Pride ..	A	,, ..	G. Pitt ..	Jeparit
Royal Scotchman ..	5	,, ..	C. L. Harberger ..	Raluana P.O.
Young Maritimas ..	4	,, ..	W. M. Rowan ..	Kyneton

* Parts I., II., and III. were printed in this *Journal* for August, October, and November respectively.

PREPARING POULTRY FOR MARKET.

W. C. Rugg, Chief Poultry Expert.

An Ancient Practice.

The art of preparing poultry for the table was known to the ancient Romans. Pliny mentions the inhabitants of Delos as the first to prepare fowls artificially for the table. In all probability the artificial preparation was what is to-day called cramming, and there is no doubt the luxurious Romans ate crammed poultry extensively. Cramming of geese was also practised in ancient times by the Egyptians, as evidenced by tablets found in one of the pyramids of Sakkara which was erected about 4,000 years ago. References are also made by ancient Roman writers, notably Columella, showing that intensive feeding of domestic poultry before slaughter was extensively adopted in Italy nearly 2,000 years ago.

Yet any one paying a visit to the poultry auction rooms in Melbourne, and carefully examining the majority of birds that are offered for sale, must come to the conclusion that the proper preparation of poultry for table purposes is now one of the lost arts. Almost every poultry auctioneer in Melbourne is deploring the number of poorly-fed birds that are forwarded each week for sale. Suppliers cannot help but see in the press reports of the high prices that the few well-conditioned birds bring, yet they do not seem to improve their methods of marketing. There is no doubt the buyers are there and willing to pay high prices, but they demand A1 quality. One often wonders, when on rare occasions really good birds are put up for auction, whether these buyers have any limit: they certainly don't seem to have.

High Prices Obtainable only for Well-fattened Birds.

High prices can be obtained only when the birds have been well fed and are marketed in the best possible condition; that is—clean and attractive, and free from faults and blemishes. Suppliers can, by adopting better methods, give the buyers a better article, and so stimulate local consumption which will mean higher prices for themselves.

With the rapid increase in population there is every reason to believe that the trade to be done in table poultry is capable of considerable expansion. But this expansion will never take place so long as producers follow the slip-shod methods that are common at present. All farmers know that, with their larger animals such as cattle, sheep, and pigs, good and plentiful feeding is an absolute necessity if the flesh is to be of the quantity and to have the quality desirable, yet the majority of the poultry-farmers send their birds to market while they are only half fat, and often so overcrowded in the crates that they reach the auction-room in anything but the right condition to attract the best buyers. Thousands of pounds are lost to producers each year in this way. To send a lean bird to market is a wasteful practice. With the improperly-fed bird the proportion of flesh to bone and offal is small, and the quality of flesh of half-fattened stock is distinctly inferior to that of the fattened.

The reason why fatted flesh is superior to unfatted is that globules of fat are distributed throughout the muscles, displacing to a great extent the moisture found therein. Not only, therefore, is the bulk increased, but when the flesh is cooked, the fat does not evaporate to the same extent as the water, but as it melts it softens the tissue, making it more digestible and finer in flavour. I have found that young roosters of the heavy breeds, such as Black Orpington, Rhode Island Reds, Plymouth Rocks and Sussex, bring the highest prices at the ages of 20 to 24 weeks. At this time they should weigh from 5 lb. upwards, and must be plump and straight-breasted. In light breeds such as Leghorns, the cockerels should be marketed at 13 to 15 weeks old, and should weigh about 2½ lb. If birds are allowed to get any older than the periods mentioned before marketing, the flesh loses much of its fine texture, and they are not sought by the best buyers.

The Method of Fattening.

The best method of fattening fowls is to provide coops in which they can be confined, as it is not economical to feed heavily and then allow

A Fattening Coop.

the birds to run off any condition one has put on them. These coops can be built 7 ft. 6 in. long, 20 inches broad, and 20 inches high, and may be divided into three compartments each of which will accommodate five or six birds, or fifteen to eighteen birds in all. These coops can be built of light battens 1½ inches apart, except in the front, where they should be 2½ inches apart, so that the birds can easily put out their heads for feeding. The bottom bars on which the birds stand can be made with specially cut wood 1 inch wide at the top, 1 inch in depth, narrowing to half an inch below, so that the droppings will fall through without catching on the sides, as would be the case if the bars were perfectly square, or a wire netting floor can be put in.

These coops should be placed in a sheltered position. The main idea is to keep the birds warm and, to some extent, in the dark. Professor Warrington, in "His Chemistry of the Farm," says "Economy of food is promoted by diminishing the demand for heat and work." The temperature most favorable for increase of weight is about 60 deg.

F. Quietness and freedom from excitement are essential for rapid fattening; therefore it is not good policy to put the fattening coop near the motor garage or the dog kennel.

The nature of the food used is, of course, very important. What is called soft food is commonly used; that is, meals mixed with some liquid, preferably milk, into the consistency necessary according to the system of feeding adopted. The meals I prefer are oaten pollard and barley pollard, and, if of good quality, wheaten pollard, but most of the wheaten pollard on the market is useless for the purpose of fattening, as it contains too much straw and other rubbish. No doubt maize meal will add greatly to the bulk of the birds, but it forms a yellow oily fat, which is wasteful in cooking, and the birds so fattened are never so nice in appearance. The reason meal is such a good fattening food is that, when mixed with milk, it is much more easily digested than whole grain. To ensure successful fattening it is essential that the birds be kept in strict confinement, otherwise they will not increase in weight nearly so rapidly, and thus the organs of the body will not be in a condition to enable rapid assimilation of hard grain.

While a great deal of the success in fattening is due to the meals employed, the colour of flesh is largely determined by whether milk is used or not. The large amount of phosphates in the solids of milk secures the whiteness in flesh which is preferred in Victoria, and, in fact, nearly all countries except America, where yellow-skinned birds are, I understand, considered superior.

There are many methods adopted in preparing food for fattening. Many fatteners mix the meal with milk some hours before it is to be used, allowing it to stand; during this time, slight fermentation takes place which, it is claimed, assists the process of fattening. If only separator milk is available, it is an advantage to add mutton fat or butchers' suet. The fat and suet should be melted and mixed carefully through the soft food; otherwise it will be strewn through the food in lumps. Only a small quantity of fat should be given the first day or two, about 4 ounces to twenty birds, gradually increasing till each bird is getting about half an ounce per day. If whole milk can be obtained it is not necessary to use fat. If birds have been well reared they can usually be got into prime condition within two to three weeks in the fattening coops.

They should not be fed until twelve hours after they have been placed in the fattening coop; thereafter they should be fed every twelve hours. The amount of food to be given varies with individual birds; the first feed should be as much as they will consume in about 10 minutes; any that is left in the trough must be taken away. As their appetites improve they should be given all they will eat in from 20 to 30 minutes, and no more should be given for twelve hours. For the best results the birds must be fed regularly to the hour. It is, however, a good idea to feel the birds' crops, and if it is found that any food from the previous meal remains there, it is better to omit a feeding time. A good man can judge to a nicety the amount of food the birds can assimilate, and a great deal of the success of the work will depend on his judgment in this direction.

If any of the birds appear sickly and "go off" their food, it is useless to continue the fattening of them. If they are fairly well fatted, the

best thing to do is to fast them immediately and kill them. If any birds "go off" their food in the early stages, it is better to remove them from the pens, put them in an outside run for a day or two, and feed a little hard wheat, when they will usually recover and can be returned to the pen for fattening. All birds should be kept without food for at least 24 hours before slaughter. It is well known that birds starved in this manner will keep much longer. Further, the flesh of fowls so fasted eats much better, and it is less liable to hardness. Another point is that the fowl starved in this way is much more easily drawn and is not so offensive during the operation.

The Fattening of Ducks.

It is not economical to fatten ducks specially for the Melbourne market if they have to be transported long distances by train. They are bad travellers, owing to their being very nervous, and are apt to be injured in the crate by rushing and crowding one on top of the other when frightened. However, much of this crowding can be avoided if a partition of hessian is put in the crate and only about eight or ten birds are put in the one compartment. Usually sixteen to twenty are placed in one crate, and if no partition is put in, much damage to the birds sometimes occurs.

White ducks, Pekin, or Aylesbury, or these breeds crossed, are more popular with buyers than the coloured varieties. They should be marketed at from ten to thirteen weeks old, at which time they should weigh from 5 lb. upwards. Muscovy drakelings should be marketed at sixteen to eighteen weeks old, when, if well fed, they will weigh 8 to 10 lb. Some of the coloured varieties, though small, have a very fine-flavoured flesh, notably Khaki Campbells—but Indian Runners are not popular as table ducks.

Ducks can be fattened on the same kinds of meal as have been recommended for fowls. They should be kept in small shady yards. Very little water should be given them, and that for drinking only, and therefore it should be so protected that they cannot splash it about.

The Fattening of Geese.

Geese are not very popular in Victoria, and there is little demand for them except during later November and December for the Christmas trade. For this state of affairs producers are mainly to blame, because of the fact that too many grass-fed and small-framed birds are sent in for sale. If these birds were put up in pens bedded with straw, and liberally fed on oats and wheat soaked in troughs of water for a week or two, and "finished off" during the last week with oaten pollard and milk, and a little boiled barley, both quality and quantity of flesh would be greatly improved, and the result would be increased demand. Considering that geese get most of their feed in paddocks during their growing period, it would surely pay the farmer to feed them well for the last three weeks.

Before the war, enormous numbers of geese from Russia were exported to Germany. In an interesting report from the British Consul-General at Berlin, in 1909, he stated that a special "goose train" of

from fifteen to forty cars arrived in that city daily from the Russian frontier, fitted specially for, and occupied solely by this traffic. The figures showed that, in 1909, live geese to the number of 6,681,723 were imported into Germany from Russia; their value was given as £1,135,000. But the war finished this trade, and, I think, it is possible that, during the lean years following the war, the Russians finished the geese.

The Fattening of Turkeys.

Turkeys are now more popular than ever as table birds, although suppliers are losing a lot of money by marketing the majority of their birds in poor condition; those who send in good prime birds are receiving splendid prices.

When breeding turkeys for the Department, some years ago, I found that plentiful supplies of milk greatly improved the texture of flesh, and that in "topping them off," good results were obtained by soaking wheat and also oats in milk for 24 hours. Often slight fermentation takes place and the milk curdles and the whole is much relished by the birds. In fattening turkeys, as with all other poultry, regularity of feeding is absolutely necessary.

Crooked-breasted Turkeys.

A cause of loss to turkey breeders is the breeding of birds with crooked breasts. There are far too many of these coming on to the market every season. It does not matter how well grown, how plump in condition, or what weight they are, the best buyers don't want them. They are no good for export, or for their best table trade, and are usually left for competition amongst the smaller buyers. By a little care this defect could be overcome. It is unwise to breed from crooked-breasted birds, particularly a crooked-breasted male bird.

When rearing young ones, they should never be allowed to roost on wire fences, paling fences, or on farm implements. When the little ones are feathering they should be provided with low frames of perches made of 3-inch battens on the flat, about 12 to 18 inches high. These should be placed where the little ones are being fed, and after a meal they will fly on to these for a rest, and they will quickly learn to select the right kind of perch as they grow up.

I have heard auctioneers called very hard names by lady breeders of turkeys when they did not receive as much for their birds as they thought they should have. Mrs. A. once told me that her turkeys were heavier and better than Mrs. B's, and yet she got 10s. a pair less. I examined Mrs. A's breeding stock, and found that her stud gobbler, though a magnificent bird to the eye, weighing nearly 40 lb., had a breast like a boomerang, while five hens out of seven were nearly as bad.

How to Send Birds to Market.

I believe producers are losing thousands of pounds annually by the careless manner in which they despatch their birds to market. In some instances they are crowded into unsuitable boxes, sometimes badly ventilated; at other times into open boxes covered with wire-netting. Should these be left exposed to the sun on the railway station the birds suffer in comfort, lose condition, and the owner loses money.

The crates usually loaned to producers by auctioneers measure, approximately, 4 feet by 2 ft. 6 in., by 18 inches deep, and in those crates the following numbers of birds should be put and no more. Hens or roosters, 20 to 24. Ducks, 16 to 24. Geese, 10 to 14, according to size. Good turkey gobblers, averaging 20 lb. in weight, not more than eight birds; turkey hens, not more than twelve. On many occasions these numbers are exceeded; no doubt suppliers think they are saving freight, but in many instances they are losing far more through deaths. Further, overcrowding and over-heating cause the birds to present a poor appearance on arrival at the auction-room.

Ducks, geese, and turkeys should always have a good bedding of straw or grass on the bottom of the crate.

In one trip of the Better Farming Train, I saw turkeys on eight different railway stations, consigned to Melbourne, and in not a solitary instance was there a bit of straw in the crates.

At times the jolting and shunting of the train throws the birds down on their breasts, and in this way they are liable to get bruised and to have skin knocked off, and the moment they do, down goes their value. The buyers that attend the auction-rooms are as keen as any men I know, and they know the faults of every bird before the auction starts, and they limit their bids accordingly. Those damaged birds are no good for export, neither are they suitable for the best local trade; thus the birds are left for the second-class trade. It is an impossibility for the auctioneers to get high prices for these damaged birds no matter what weight they are.

My experience of the auctioneers is that they are out to get the last shilling, but it is impossible for them to get high prices for birds with faults.

Breeders must remember that it costs just as much to produce these crooked-breasted turkeys as it does to rear sound-keeled ones. The freight, commission, and other expenses on half-fattened birds are just as great as on prime birds. Why go to all the trouble of putting an inferior article on the market when by a little care and attention to the points I have mentioned one can get a great deal more pleasure and profit out of one's business.

INTRODUCTION OF POULTRY INTO AUSTRALIA.

The only countries from which the introduction of poultry into Australia is permitted are Great Britain, Ireland, the United States of America, Canada and New Zealand. By a proclamation under the Commonwealth Quarantine Act issued on the 1st November, the conditions under which importations may be made are—

> Provided that poultry from any of the said countries except New Zealand shall be accompanied by a certificate from a qualified veterinary surgeon to the effect that by an agglutination test the poultry were found to be free from bacillary white diarrhoea; and that they were free from any variety of the disease known as fowl pest.

CURRENT ORCHARD WORK.

(A Wireless Talk Broadcast through 3LO.)

By H. W. Davey, Chief Orchard Supervisor.

December is a busy time for the orchardist, especially to those whose main crop is apples or pears. Most growers have already applied two codling sprays, and are now* preparing to apply the third.

Codling Moth Experiments.

Spraying experiments for the control of codling moth are being carried out at Doncaster by Mr. Hammond, Senior Orchard Supervisor. In addition to the tests with arsenate of lead in combination with white oils, experiments are being made with lures. These lures consist of molasses (1 part) and water (16 parts), with some yeast added to cause fermentation, and already most satisfactory results have been obtained. The lure is placed in tins and suspended in trees, and the moths are attracted by the fermented mixture, and fall into it and are drowned. Only twelve tins are being employed in the experiments, and up to 2nd December 658 codling moths had been captured by them. If only 50 per cent. of the moths were females, this alone will mean a great reduction in the number of eggs laid in these blocks of trees. (The orchards in which the moths were captured are well kept in every respect.)

The tins used for holding the lure are the ordinary half-gallon lever-lid tins. It has been proved that cans of this description give much better results than do receptacles not possessing a flange.

Arsenate of lead—5 lb. to 80 gallons water—is the usual strength for using against codling moth, and from previous tests it would appear that nothing is gained by having a stronger mixture.

Aphelinus and Woolly Aphis.

There are many people who, because the woolly aphis is rather plentiful at the present time, are of the opinion that the small wasp *Aphelinus mali* is not as active in destroying woolly aphis as it was last season. Others, again, are fearful that it may forsake the woolly aphis, and thus become a pest itself, like so many other animal introductions.

The reason why the woolly aphis is so noticeable this season is due to the recent wet and cold weather—conditions very favorable to its rapid increase. On the other hand, these weather conditions have retarded the activities of the aphelinus.

Quite recently, however, the aphelinus has made its appearance in very large numbers, and the fact that the aphides are now fairly plentiful indicates that these wasps will soon be again produced in great numbers, and the woolly aphis will consequently diminish almost to the vanishing point. I have at other times mentioned the limitations of parasites. The real control of any insect is the food supply, so that when a successful parasite, such as the aphelinus, reduces its host,

* This talk was broadcast 3rd December, 1929.

it automatically reduces its own numbers. The mission of all such parasites is control, and not extermination, for it is quite a mistaken idea that Nature exterminates species by such methods.

Regarding the biological control of aphis by means of insect parasites, an experiment is now being conducted at the Burnley School of Horticulture, for the purpose of ascertaining whether it is possible to induce the aphelinus wasp to parasitize the green peach aphis. This, if successful, would be of immense value to peach-growers.

A question frequently asked is, Will the aphelinus ever become a pest, like so many other introductions? To such a question I can safely say—No. First, because such a wasp can parasitize only a very small insect such as an aphis, and, even if it did change its host, the latter would have to be a very small insect closely allied to woolly aphis, and belonging to the same class, viz., *Homoptera;* so that, even if it can be induced to seek another host, it will only be further extending its usefulness.

The word parasite is frequently wrongly applied to insects that are merely predatory—that is, insects which kill and eat other insects; such insects—ladybirds, for instance—while being very useful, cannot be classed as parasites.

The aphelinus, on the other hand, is a true ento-parasite; that is, one that feeds within the body of its host, and undergoes its metamorphoses there, before it emerges as a perfect insect.

At present many applications are being received from all parts of Victoria for supplies of aphelinus, and I take this opportunity of mentioning that any commercial apple-grower can obtain a supply of parasitized woolly aphis by making application to the Orchard Supervisor in charge of his district.

The spread of the aphelinus throughout Victoria has been so remarkable that, in my opinion, it is only in the most remote districts that it has failed to establish itself. Several instances have come under the notice of the Orchard Supervision Branch where people have made applications to be supplied with aphelinus, yet an inspection of their apple-trees showed that the parasites were there already in plenty. Owing to the extreme smallness of the insects their presence in the orchard is not discovered, or even suspected, by persons who have had no previous experience of them.

On woolly-aphis-infested trees in isolated places, where for some reason or other the aphelinus has not become established, the best spray to employ is 1 pint of nicotine sulphate and 1 gallon miscible oil to 80 gallons of water. The pint of nicotine sulphate should be diluted with 4 gallons of water before it is added to the bulk mixture of oil and water; this is a guard against the curdling of the mixture. This spray is also effective against Red Spider, which will become more plentiful as the summer advances.

Maroga Moth of Stone Fruits.

The Maroga Moth of Stone Fruits is now to be seen in some orchards, or, rather, its workings are, for the moth itself is seldom seen, and many orchardists would not recognize it.

All growers of stone fruits in Southern Victoria are only too familiar with the tunnelings made by the caterpillar of the moth.

Spraying is of no value against the insects, but the present is a good time to search for and locate their tunnels in stems and branches of trees. When these are found, the webbing and frass should be cleaned away, and a small piece of cotton-wool that has been previously dipped in bi-sulphide of carbon should be pushed into the tunnel, which must then be immediately plugged up with putty, soap, or a piece of well-worked clay.

Peach Aphis.

I am glad to say that reports from the Goulburn Valley indicate that Peach Aphis has now practically disappeared. Previous reports from this great peach-growing centre go to show that the tiny Yellow-fronted Ladybird, *Scymnus flavifrons*, as well as the larger species, *Leis conformis*, has done wonderfully good work in cleaning up the aphis.

The former species of ladybird (*Scymnus*) is very small, and, therefore, both it and its usefulness are frequently overlooked by orchardists, although the larger species, *Leis*, is a well-known insect to most, and its larva is equally well known. These useful beetles would be of even greater service to peach-growers were it not for the ovicidal and contact sprays, applied for the control of aphides. Sprays cannot discriminate between friends and foes of the grower, and, unfortunately, they keep useful beetles in check until late in the season.

The Root Borer.

Root-borer beetles are now plentiful, and crinoline traps should be placed round trunks of all trees wherever such beetles are found to be present. The trap was figured and described in this *Journal* for September, 1928, page 548. It will effectually prevent beetles ascending the trees for the purpose of depositing their eggs on the leaves. It also keeps the beetles congregated on the trunk below the crinoline, making it an easy matter to collect them for killing. It would, of course, be much better if the beetles thus captured could be placed in a cage alive, where they could rear the wasp parasites with which many of them are infested. This would prevent a waste of parasites, which later would assist in controlling the beetles.

Brown Rot of Stone Fruits.

In view of the unseasonable weather, it behoves all growers to keep a sharp lookout for Brown Rot on stone fruits. This fungus attacks blossoms, twigs, leaves, and fruit; and it is the latter which at the present time should be carefully watched for the first appearance of the fungus. The first indication of the disease on the fruit is a small brown spot. This rapidly enlarges, until the whole of the fruit is enveloped, sometimes in the course of a day.

The recent wet weather has caused sporadic outbreaks of Brown Rot; but these, fortunately up till now, have been only light attacks, due chiefly to the rains being associated with low temperatures, instead of high temperatures with increased humidity.

At the first signs of an outbreak of Brown Rot all fruits attacked should be immediately picked and destroyed, either by boiling same or burning.

Where the disease is present, orchard workers should take great care not to touch healthy fruits without first washing their hands. The same care is necessary when picking fruits for market, as one diseased fruit can easily affect the whole contents of a case before it is opened up for sale, especially if weather conditions are favorable to spread of the disease. At the present time, the best method of controlling Brown Rot is to spray the trees affected with lime sulphur —1 gallon in 80 gallons water—or precipitated sulphur—8 lb. to 80 gallons.

Should apricots be attacked, lime sulphur should not be used, as it would cause the tree to drop its fruit. No harm, however, would result from the use of precipitated sulphur instead of the lime sulphur.

Cherry Slug.

Cherry trees that are being attacked by Cherry Slugs should be given a spray made from 4 lb. of arsenate of lead to 80 gallons of water. It should be applied as soon as the last of the cherries have been picked.

Care of Top-grafted Trees.

Attention to trees that have been top-grafted is necessary, as the present season has been very favorable to strong growths, and very vigorous scions are now liable to blow off, if allowed to grow unchecked. Even where there is no danger of their being blown off, much useful work can now be done in regulating their growth.

Removing Young Shoots.

In the case of European plums that have been cut over and top-grafted, it is desirable, if much gum be present, to allow numbers of shoots arising from stock to remain, instead of suppressing them; by permitting a percentage of them to grow, the excess sap will be taken up and gumming will be stopped to a great extent. Excessive gumming in European plum trees is likely to cause great injury to the scions.

Judgment must be used in disbudding the stocks. If too many shoots be removed from a very strong-growing stock, the root system will become debilitated, owing to a deficiency of leaves preventing it from elaborating the crude sap sent up from the root system. This will result in loss of vigour to both scions and stock.

Surface Cultivation Necessary.

Though the summer so far has been very cool, as likely as not it will yet prove to be a warm one; therefore, good surface cultivation should not be neglected.

Cultivation is important for several reasons at this time of the year. First, for the purpose of destroying weeds, which, apart from harbouring insect diseases, are great robbers of soil moisture and

fertility. If a dry soil mulch be maintained (the drier the better), it will conserve soil moisture to a much greater extent than will an unbroken surface. Cultivation also brings soil particles together that never previously were in contact, so causing chemical changes to take place.

At present cultivation should consist chiefly of stirring the soil to create a surface mulch; turning the soil over tends to dry it out.

GRADING AND PACKING OF PEACHES.

(By Basil Krone, Fruit Packing Expert.)

The delicate nature of the peach demands that it be handled with great care. Some varieties have a pronounced lip or suture margin; some a prominent point, others have both, and some neither. Usually, ripening commences at these places. Therefore, any system of packing must include protection for those parts which, ripening first, are more susceptible to damage during packing and transport than are the other portions of the fruit. As good packing and marketing, however, cannot result without correct methods of harvesting, I shall begin with a few hints as to the time at which peaches should be picked.

Harvesting.

As a guide to maturity, there is a saying "that when a peach is large enough, and coloured enough, it is ripe enough." This is an excellent guide, but it might be well to add that the peach must also remain "hard enough" even at the lip or the point. At harvesting, the ground colour of the skin should be commencing to change from its dark green to a lighter green or pale yellow shade. If peaches are harvested prior to reaching this stage, they will not mature. Usually, an immature peach develops a shrivelled or wilted appearance a few days after harvesting.

Those trees whose fruit is normally small should be remembered at pruning time and the laterals should then be rigorously thinned. This method is to be preferred to thinning the fruit after it has set; thinning at pruning time will produce an abundant supply of good fruiting laterals for the following year; thinning the fruit will not.

Grading and Sizing.

Grading and sizing are particularly important features in the marketing of peaches. Losses sometimes occur through faulty methods of grading. One of the results of faulty grading is the mixing of ripe and semi-ripe peaches. This applies equally to nectarines, apricots, plums and tomatoes. The ripe fruit should be sorted out from the semi-ripe, and each kind packed in separate packages. If both are placed in the same case, the ripe fruit will be badly damaged in transit through contact with the unripe, which of course are much harder.

The sizing of peaches in Victoria is done chiefly by machinery. The usual diameters are 2¼, 2½, 2¾, and 3 inches, and the fruit is packed accordingly on a standard system known as the "diagonal" check pack.

By a 2¼ inch peach is meant one that measures 2¼ inches from cheek to cheek; this section includes all other peaches over this size and up to but not 2½ inches in diameter, and so on for the other sizes. If the work be done by hand and not by machinery, the sizes are decided by a set of rings or holes of the diameters mentioned, cut out from tin, wood, cardboard, &c. One or two peaches of each of the different sizes are measured, and the packer, keeping samples in view, or in his mind's eye, is able to size a harvest fairly accurately.

Packing.

Undoubtedly, the best method of landing high class dessert peaches in the very best condition over long distances is to pack them in single layers in trays. Each peach should be wrapped in sulphite tissue paper and nestled separately in wood-wool. However, the "long" bushel case is extensively used for the Victorian and Inter-State trade, and therefore the packing of this container calls for more discussion than does the tray method.

The modern and popular diagonal system of packing peaches has superseded the now obsolete "pyramid" or "floradora" system, which, in past years, was well known in the industry.

A point to be emphasized in regard to the newer method is that it favours the buyer, for when it is used, no seller can deceive a purchaser as far as numbers are concerned.

With the pyramid system, the cases appeared full, when in reality, they would have held more if the diagonal pack had been used.

With the "diagonal" system of packing peaches in the "long" bushel case, all the packer need worry about is the adoption of the 2–2 pack for very small peaches such as Briggs' Red May, and for apricots and nectarines; the 2–1 pack for medium or average size peaches, such as Hale's Early, &c., and the 1–1 pack for extremely large varieties like Pullar's Clingstone.

The 2–1 pack is used for packing peaches to a very much greater extent than is the 2–2 or 1–1 packs, because by its use, all sizes from 2¼ inches to 3 inches—a range which embraces the chief commercial sizes—can be packed conveniently. With the Elberta, the 2–1 pack need scarcely ever be departed from, but with Pullar's Clingstone and kindred types of a normally large character, which are hard and carry well, the 1–1 system is nearly always the best.

For the 2–1 pack, commence packing by placing the first peach in the left hand corner of the case. The lip of the peach should face upwards with the stem against the end of the case. The second peach is placed in the right hand corner in exactly the same manner. The third peach is placed in the space between the other two. Such is the beginning of the 2–1 pack. Continue packing by placing two peaches, then one peach alternately, as described, in the spaces which are formed, until the layer is finished. The last peaches in each layer

must, of course, be reversed in order that their delicate points may not be damaged by contact with the wood at the far end of the case.

The succeeding layers are packed in exactly the same manner as the first; no two peaches rest directly on top of each other; they must all rest in the pockets or spaces made by the fruit beneath. The lips should face downwards into the spaces for protection and not against the sides of the case.

The Height of the Fruit in the Cases.

If the fruit in the first case packed does not come to the desired height for lidding purposes, the packer should not be disappointed. This occasionally happens until he is accustomed to the variations in the pockets or spacing system of the fruit in the different layer counts.

It is the size of the pockets or spaces between the fruit that controls its height in the case: therefore, if a pack comes either too high or too low, the pockets may be opened or closed by putting more or less fruit in the bottom layer. The pockets or spaces, being made more or less open, will raise or lower the fruit throughout the pack as required. After a little practice along these lines, the packer will find no difficulty in bringing all sizes of peaches to the correct height, and in such a manner that there will be a minimum of bruising in transit to market.

Little difficulties, however, persist in troubling some packers, and these are hard to explain in a brief article. The Department of Agriculture therefore has had prepared a packing-chart wall-sheet, and a copy will be forwarded, post free, to any fruit-grower or packer making application to the Department of Horticulture for one.

Points to be Remembered in Packing.

1. The bottom layer should be packed with the lip or suture margin facing upwards. In the second and succeeding layers, these should face downwards in the pockets or spaces caused by the fruit beneath.
2. The correct placing of the first layer is the most important factor in securing the correct height.
3. It is the size of the pockets or spaces that regulates the height of the fruit.
4. The second and succeeding layers in each pack must not rest directly on top of the fruit beneath, but in the spaces.
5. No fruit rests directly on top of another.
6. All fruit should be placed on the cheek; this will produce an even surface on each layer.
7. The diameter of the peach is measured from cheek to cheek—not from stem to eye.
8. Sizing, grading and packing should be treated as three separate operations.
9. Grade for colour. Sort the soft from the hard peaches, and pack in separate cases so as to avoid loss by bruising.

10. The outside layers should be a true indication of size and quality throughout the case. A retailer purchasing a case of fruit with a number of inferior specimens included is compelled to raise the price of the remainder to secure his profit; the increase in price to the consumer tends to decreased consumption; therefore, it is a decided advantage to pack true to grade.
11. Don't nail cases down on the bare floor. Place a batten beneath each end of the case to minimize bruising.
12. Slack packing results in bruised fruit.
13. Use every effort to establish a reputation for your fruit. Attention to details pays handsomely.

DAIRY BREEDS AND THEIR CHARACTERISTICS.*

By A. J. Gill, Senior Herd Tester.

At the present time the majority of dairy cattle in the State are mongrels, with a small percentage of what may be termed grades. Forty years ago there were in many parts of Victoria large numbers of pure-bred milking shorthorns, of fine type and quality. They have, however, almost disappeared and their places have been taken by mongrels, and for many years our farmers have been engaged in breeding and building up mongrel herds.

Now, owing to the introduction of the Government Standard Herd Test, the farmer has been made aware of the value of good pure-bred stock, and he is setting out to undo the mistakes of the past, and is introducing well-bred sires.

One is sometimes asked which is the best breed for dairying and the question is very often a perplexing one.

In this brief article I shall say but a few words regarding each of the better-known breeds:—Mixing Shorthorn, Ayrshire, Jersey, Friesian, Red Poll, Guernsey, Dexter-Kerry, and Illawarra.

I am sometimes inclined to think that if we could concentrate on one or two breeds, we would make greater progress. However, people have different fancies, and it may be there are advantages not always patent in developing several breeds.

In Victoria there are a larger number of registered pure-stock breeders than in any other of the Australian States, and therefore I would venture to call our State "the stud farm of Australia."

The Shorthorn.

The Milking Shorthorn breed has the honour of having produced the highest yielding cow up to the present time—that cow is Melba 15th. The Shorthorn breed originated in England, and was no doubt produced from native cattle crossed with those introduced into England by the early invaders. It is claimed by some writers that prior to 1600, Shorthorn cattle were being bred by the Earls of Northumberland. In York-

* Notes of a wireless talk broadcast by 3LO.

shire, particularly in the south, a type of cattle was developed by the use of bulls called the Holderness, imported from Holland, and it is probable that the present Shorthorn breed was the outcome of this cross. The breed was for centuries noted for its heavy milking qualities. Unfortunately, from a dairyman's point of view, beef characteristics were for some years developed, and though we now have the two distinct branches, Milking and Beef Shorthorn, some of our milking Shorthorns throw stock occasionally showing all the traits of beef Shorthorns.

The colours are roan, red, white, and sometimes red and white, but in this latter case the red colour must preponderate. There is a peculiar idea prevalent that the white animals have a weak constitution, but there is no foundation for this belief.

The young stock mature early, and, from a butcher's point of view, their flesh is of fine quality. Some of the cows yield up to from 7 to 8 gallons of milk daily. The milk is of good quality, showing an average test of from about 3.8 to 4.

The Shorthorn is one of the largest dairy breeds, and the cows, when fattened, are eagerly sought by butchers. They are of a quiet disposition, and they have this characteristic so desirable in dairy animals —teats of such a nature that the cows can be easily milked.

The head of the Shorthorn should be of medium length, wide between eyes, fine nose, wide muzzle; horns short and slightly curved in; neck lean; shoulders not too heavy; deep body; hips wide; good length from hip to pin bone; straight top line; legs of medium length; good udder development; bone should not be coarse and heavy. There should be an abundance of fine soft hair; the skin should be pliable, and in no way thick and stiff.

The Jersey.

Jerseys have come into prominence during the last few years owing to their consistent production under test. They are a breed which originated on Jersey Island, and are supposed to have been produced in the early days by crossing the cattle of Normanby with those of Brittany. The fawn and white colours are attributed to the Norman stock, and the dark colour is regarded as a characteristic from the Brittany stock.

George Culley writes of French or Alderney cattle being introduced into England in 1789, and his description suggests that they bore a strong resemblance to the Jersey of to-day. The name Alderney was, at that time, applied to any of the Channel Island cattle. The stock were introduced into England partly to adorn the grounds of the gentry, and partly to provide rich milk, for which they were famous.

During the eighteenth century the Jersey Island people began to recognize the superiority of their cattle, and in order to guard against deterioration, a law was passed in 1763, which forbade the importation of any stock except animals intended for food, and it was required that these be slaughtered within 24 hours. From that time no fresh breeds have been introduced into the island.

In 1854 a Mr. Revans imported some Durham cattle, but the authorities directed that they be sold to the butcher, and some Ayrshires imported by a Captain Godfray met a similar fate.

When first introduced into Victoria the Jersey cattle were frequently described as Alderneys, and when the name Jersey came into use there was a good deal of confusion. Many believed that we had introduced two different breeds; others supposed that the two names applied to the one breed, and it was not uncommon for prizes to be offered at country shows for Jerseys or Alderneys. The misunderstanding arose through the custom already mentioned of incorrectly referring to all stock from the Channel Island as Alderneys. The cattle on Jersey Island are a breed apart from those on the Guernsey and Alderney Islands, the stock from these little islands being known as Guernseys.

The Jersey is essentially a dairy cow producing a fair quantity of yellow-coloured milk, richer in butter-fat than the milk of any other breed being milked here.

She is of pleasing appearance, and maybe reminds one of a deer. The head is short and fine, wide between the eyes; forehead dished; eyes bright and almost abnormally prominent; horns are white or amber with black tips; shoulders slightly prominent; withers narrow and refined; well-sprung ribs and large deep body; skin and bone are fine. The cows are fairly wide across the hips, though this is not characteristic of the bull; their thighs are thin and set well apart; hocks and feet are carried straight with room for a good udder. They mature quickly, and when dry fatten rapidly. Butchers, however, do not like the yellow fat. The colour of the Jersey varies from a rich orange or silver-grey to mulberry. White splashes and markings are allowed. The first Jerseys imported to this country were of white colour, and later, when animals showing white were introduced, it was thought that they were not pure-bred. As a matter of fact, however, animals of broken colour have existed on the island as far back as we can trace the breed.

The Ayrshire.

The Ayrshire, as the name indicates, is a native of Ayr, Scotland. They are noted as being hardy, thrifty cattle, and, unfortunately, quite a number of their owners endeavour to make them live up to their reputation. This accounts for their unsatisfactory position in the Government Standard Test. The breed is undoubtedly of a complex origin. At one time the cattle of Ayr were spoken of as being puny and ill-shaped, and for the most part black in colour, with more or less white on the face, back, and flanks. Later, stock was brought from beyond the British Isles, though of what breed we cannot be sure. Some writers contend that Shorthorn and Jersey, or, maybe, Guernsey blood was introduced; others that Dutch cattle were imported. Taking into consideration the peculiar blazed face common amongst both Ayrshires and Friesians, but not found in other breeds, it is a reasonable assumption that, in the early days, Dutch or Friesian cattle played a part in building up the breed. It was towards the end of the eighteenth century that the original black and white colour was replaced by red, white, brown and white.

About 1818 a Mr. John Dunlop is said to have introduced, and crossed with Ayrshires, the West Highland cattle. This probably accounts for the cocked horn, for previously, judging from a picture of the early type, the horn of the Ayrshire was similar to that of the Jersey.

The Ayrshire, as we know her to-day, is of medium size and stylish in movement. The colours vary; there may be a mingling of red, white, and brown, none of the three predominating, or an animal may be white with brown or red marks. The head should not be too long; the forehead should be wide and white in colour; full bright eyes; horns rather large, but not coarse, turning upward; nose fine between muzzle and eye; large muzzle; neck moderately long, fine, and clean, and free from wrinkles and loose skin, running straight from head to top of shoulder. The withers should be fine; the chest deep and broad. The back should be straight, with well-defined spine; well-sprung ribs; body deep, especially at flank; hind-quarters broad and straight, with fine tail nicely swung; udder starting high up at back and going well forward. The teats should be from 2 to 2½ inches long and well placed; legs rather short, showing fine bone, with fine skin and hair. The Ayrshire, if well fed, is capable of giving 5 to 6 gallons of milk, testing about 3.8 per cent. Ayrshires and grade Ayrshires predominate in Victoria, but, unfortunately, they are usually asked to produce milk on short rations.

The Friesian.

Friesian cattle were a few years ago called Holsteins, but the name Friesian has now been adopted in Victoria. In the United States of America they are spoken of frequently as Holstein-Friesians, and in some places they are termed the Dutch breed. They are one of the oldest known breeds, and are the largest of all our dairy cattle. They are mostly black and white in colour, but there are red and white Friesians in Holland, and on rare occasions a black and white cow may throw a red and white calf. A peculiar feature is that the legs are usually white, even though the rest of the body may be black, black and white, or else white with black spots.

Some writers have spoken of the Friesian as the Shorthorn of Holland. The Dutch farmer, however, has never attempted to transform this valuable breed into beef-producing animals. For a great number of years they have been bred for production solely. They are undoubtedly the heaviest milking cows in the world, and in Victoria there have been Friesians which, at their best, have produced more than 10 gallons daily. The milk is of rather low-testing quality, but the heavy flow more than compensates for this. The Friesian calf is heavier at birth than is the calf of any other breed, and it puts on weight rapidly. The steers develop into large bullocks. The cows are good foragers, and fatten rapidly when not in milk.

The Friesian is judged on dairy points:—Head of moderate length, wide between eyes; eyes bright; fine nose and wide muzzle; lean neck; fine wither; straight back; well-defined spine; wide between hips, which should be moderately prominent; hind-quarters straight and not drooping; wide between pin bones; flat thigh; deep body; fine skin; fairly fine in the bone; large udder and teats of nice size.

The Red Poll.

The Red Poll is a dual-purpose animal bred for both beef and milk. It seems to have had its origin in Norfolk and Suffolk, in the east of England. They are, no doubt, the result of crossing polled breeds, intro-

duced from Europe, with the British breeds. There were at one time two breeds—the Suffolk Red Polled and the Norfolk Red Polled. About the middle of the nineteenth century, however, the two breeds were merged, and they were called Norfolk-Suffolk Red Polled. In 1882 the name was shortened to Red Poll. The colour varies from light-red to dark-red; the rich blood-red colour is preferred; white on udder and switch is not objected to. The head is lean, and presents a characteristic poll. The poll of the bull is not so sharp as that of the cow. The nose should not be cloudy or dark. The neck is not quite so full as that of some of the beef breeds; the shoulders not so fine as those of the purely dairy breeds. The body is well ribbed up; hips lack prominence and cover easily in fattening. The udder is frequently more or less pendant; the teats are of good colour and size. All Red Polls should be free from

An Illawarra Cow.

coarseness. They give fair quantities of milk, which usually tests about 4 per cent. They are hardy and fatten readily, and yield a greater dressed weight in proportion to live weight than do most other breeds.

The Guernsey.

The Guernsey is the name applied to the cattle on Alderney and Guernsey Islands. They were recognized as a distinct breed between 1870 and 1875. Their colour is orange-yellow with white markings. They are larger than the Jersey, and not so refined looking. They give fair quantities of milk, but it does not contain quite so high a percentage of butter-fat as that of the Jersey. The Guernsey is longer in the head than is the Jersey, and it does not show the same dish in the forehead; eyes are fairly large with a gentle expression. Horns are waxy in colour and slightly curved. The nose is clear and free from black markings. The neck is lean and the throat is of fair length and clean; lean withers; thighs long and thin; back level to setting of tail; fine tail with good switch; good deep body; fine skin and hair, free from

coarseness; large udder, with teats of nice size. It is a breed that is much favoured in the United States of America, but there are only a small number in Victoria, and only three herds are competing in the Government Herd Test.

The Illawarra.

The Illawarra cattle are of special interest to us because the breed is of Australian origin. Some of these cattle were exhibited at the last Melbourne Royal Show and attracted a good deal of attention. The breed shows evidence chiefly of Ayrshire and Shorthorn blood: probably other blood may have been present in some of the foundation stock. They appear to be good producers, though, of course, as with all animals derived from a mixing of breeds, it will take some time and considerable care and selection before characteristics become firmly fixed. The longer a breed has been bred along certain lines the more fixed will its characteristics become.

A Dexter-Kerry Cow.

The points on which the Illawarras are judged are chiefly dairy:—They should be of alert appearance; eyes large and bright; forehead wide, dishing; nose of fair length; horns of medium size, but not coarse; neck clean, of fair length, gracefully connected with head and shoulders; back straight; a good barrel; hips broad and level; deep at flank; thighs flat and free from fat; udder well developed in back and front, but not too pendulous; teats of good size and well apart; fine skin, hair fine, the coat being shorter than that of the Shorthorn; colour similar to that of the Shorthorn.

It is understood that the Milking Shorthorn Cattle Association of New South Wales has amalgamated with that State's Illawarra Association. It seems surprising that such an amalgamation should have been made at this early stage of the Illawarra's history, and to me the wisdom of the move is questionable.

The Dexter-Kerry.

The Dexter-Kerry cattle originated in Ireland; the first portion of the name is derived from the breeder who first raised them. Some writers affirm that they are the result of selection from pure Kerry stock; others that Devon cattle crossed with Kerry stock were used. Though the Dexter-Kerries we have seen in Victoria are black in colour, some of the breed are red; both colours are allowed; red or black, a little white on the udder and on inside of flank, will pass. They are a small sturdy animal, the smallest of all dairy breeds in Victoria. Owing to their smallness they did not appeal to the Victorian farmer. Some years ago a herd was entered in the Government Test, and the standard set for the breeds of Victoria did not prove beyond them—in fact, the herd acquitted itself well. In shape they do not conform to the general idea of correct type for dairy cattle. The neck is rather short, deep, and thick; the shoulders are thick; quarters are deep, well fleshed, and squarely made behind; the body is plump; the legs short; head should be short and broad; wide muzzle, with wide distended nostrils; level back; skin soft and mellow; hair fine, plentiful and silky. They have good udders, with teats of nice size.

The Dexters are exceedingly hardy, and should make ideal house cows. They may be termed a miniature dual-purpose animal, and in judging them both milk and beef-producing qualities are taken into consideration.

SWAN HILL CROP AND FALLOW COMPETITION, 1929.

Report by the Judge, J. Brake, B.Agr.Sc., Senior Inspector of Agriculture:

Although improved methods and higher-yielding varieties have been introduced into the Swan Hill district and wheat-growing has reached a fairly high level, there is still room for improvement. For instance, the round of judging revealed a lack of uniformity or standardization in methods which must certainly mean a reduction in the district's output of wheat. An illustration of this was seen in the variation of superphosphate applications from 150 to 60 lb. per acre; with such a large range in the dressings, it is only reasonable to suppose that maximum yields are not being obtained in all cases.

It is hoped that the experimental plots established this year by the Department of Agriculture on the property of Mr. G. D. Brydon will, in a few seasons, provide definite evidence that will indicate the best practices for highest returns, and thus give a clear lead to the farmers of the district.

In such a dry year, any odd falls of rain received by one farm and not by another assume greater importance than in wetter years, and result in better yields; several instances of this were noted, the heavier crops being in those parts of the district which received a little more rain than elsewhere. This additional rain appeared in most cases to override any slight difference in the quality of the fallow.

Around Swan Hill, after about 50 points of rain in February and 150 in March, the amount registered each month was much below normal. The total from the 1st January up to the end of October was a little more than 6½ inches, the normal for that period being 11⅓ inches.

From June to October, 342 points fell; with such a small registration during the growing period of the crop, it is a matter for satisfaction that a number of the crops will yield in the vicinity of 12 bushels to the acre. Although bare fallowing enables wheat to give satisfactory yields with less rain during the growing period than formerly, even the best of fallows this season have failed to return good crops because of abnormal shortage of rain in those months.

In this connexion, an interesting illustration is afforded by the paddock in which the experimental plots are situated. From 1895 to

Farmers' Field Day—Swan Hill Experimental Plots.

Mr. J. Brake, Inspector of Agriculture, assisted by Mr. G. S. Gordon, Cerealist, and Mr. A. B. Hackwell, Science Field Officer, explained the object and lessons of the test.
The attendance at the Field Day was about 200.

1902, the paddock was sown to wheat each year, but did not return the seed sown in any one season; this year, 1929, with no more rainfall than was received during any of the years mentioned, there is every prospect of stripping several bags per acre.

The Fallows.

The very low rainfall for the year and its scattered nature rendered out of the question the preparation of first class fallow. At the same time, rather too much stress is apt to be laid on the absence of rain as the reason for a poorly prepared exhibit. This becomes very evident in going from fallow to fallow when judging.

Disadvantages of Delaying Cultivation.

Work on most of the fallows seen commenced not later than July, but since many other fallows in the district were ploughed very late,

mention here of the results of delaying cultivation would not be out of place. Fallowing in July is bushels and in some cases bags better than turning the ground up in late winter. In a district like Swan Hill, about 40 to 50 per cent. of the land to be fallowed should be ploughed or scarified in the summer, i.e., summer fallowed in March or April; by that means, the remaining 50 per cent. can be completed comfortably in July, and all work is facilitated for the year.

In one experiment conducted by the Department at Rutherglen, the average yield for thirteen years from July fallowed land was 24.8 bushels per acre as against 19.4 bushels from that ploughed in October—a reduction in yield of 20 per cent. due to late fallowing. In the cultivation trials at Carwarp in the Mallee, the reduction in yield over three years due to the same cause also has been about 20 per cent., the yields there being 11.7 bushels per acre from the July fallowed plot and 9.4 bushels per acre from the October fallowed plot.

Another distinct advantage of early fallowing is that more latitude is given in selecting the date for commencing the last working before the summer. Late November rains may necessitate an additional working in an occasional year, but normally the last pre-summer working can be safely done in October before hay cutting, and to do this with greatest benefit to the paddocks requires that the first ploughing should have been done in early winter.

Comments on the Fallows.

Most of the fallows inspected were worked three to four times and these exhibited some signs of taking shape, notwithstanding the scarcity of rain to assist seed-bed formation, &c.; a few, however, had only been ploughed, or perhaps ploughed and harrowed, and these were naturally in a very raw state.

Moisture content on the whole was surprisingly good, and very little weed growth was to be seen; the dry season, of course, assisted in keeping fallows clean by not contributing sufficient moisture to germinate the weeds.

Mr. D. Kelly of Kunut gained first place with a total of 85 points. Considering the season, this fallow was well prepared with a nice shallow mulch and good moisture. Careful cultivation methods were evidenced by the straight work and the absence of missed land; a fairly even seed-bed had also been prepared.

The paddock was sundercut in June, spring-tooth cultivated in early July, again in September, and harrowed in October.

Mr. R. P. Kelly's exhibit was second, being awarded only one point less than that of the winner. It was slightly cleaner than the latter, but had rather less moisture and a seed-bed that did not appear quite so good. It was worked lightly with the sundercut in March, spring-toothed in May, and harrowed twice—early in July and early in October. The soils of both these fallows were of a sandy nature.

Third place went to Mr. F. A. Williams, whose fallow was good in most respects, but was considered rather deep in the mulch. The soil was a red sandy loam of a type that lends itself to the preparation of a first class fallow. This was ploughed in July and cultivated in early October.

The awards are as follows:—

Fallow Section—50 to 100 Acres.

Name.	Mulch.	Moisture.	Absence of Weeds.	Cultivation.	Total.
Maximum Points	25	25	25	25	100
Kelly, D.	20	21	22	22	85
Kelly, R. P.	20	20	23	21	84
Williams, F. A.	18	21	24	21	84
Gordon, H. C.	19	20	23	20	82
Hucker, J. L.	19	19	22	21	81
Brown, Jas.	18	19	24	20	81
Watson, S. P. and Sons (B)	19	17	24	21	81
Newell, C. J.	19	18	24	19	80
Watson, S. P. and Sons (A)	19	18	22	20	79
Walker, H.	16	20	22	20	78
Sayers, H. L.	17	18	24	18	77
Sinclair, R. and Son	18	19	20	20	77

The Crops.

Owing to the fact that judging took place when the crops were in a fairly green stage, it was impossible to separate the crops in regard to their purity and trueness to type. The general workmanship displayed in the crops was good, and weeds and diseases were not prevalent.

The rate of seeding varied from 48 lb. per acre to 80 lb. per acre. Experimental work and also general practice indicates that usually no advantage is gained by sowing more than 75 to 80 lb. per acre. The weight of seed sown should usually be increased slightly with large grained varieties, and also when sowing late in the season, but normally for Swan Hill conditions, about 50 lb. of dry pickled seed, and say 65 lb. of wet pickled seed appear to be the best rates.

Six crops out of the ten in the competition were sown with dry pickled seed, whilst for the remainder, formalin had been used. Both of these pickles are good, with the advantages slightly in favour of the dry pickle. Formalin sometimes causes erratic germination, and for best results should be used within two days of sowing, whilst dry pickling may be carried out at any time; it is, however, a little more expensive than formalin.

Messrs. S. P. Watson and Sons of Nyah West obtained highest points for crop with an exhibit of Free Gallipoli. The seed had been pickled with formalin and was sown on the 22nd May, at the rate of 55 lb. per acre, with 90 lb. of 22 per cent. superphosphate per acre. Without reflecting on the exhibit, it is only fair to say that this portion of the district had received slightly more rain than other places. It was a well drilled crop with very little weed growth present. It contained a few heads of a tall variety and had been rather badly affected with loose and flag smuts.

Mr. C. J. Newell took second place with a very even crop of Ranee. Prior to sowing, the fallow was worked with a rigid tyned cultivator; the crop was sown with the combine and harrowed in late June,

the rate of sowing being 60 lb. per acre, and manuring 115 lb. of 22 per cent superphosphate per acre. The wheat appeared true to type, and was clean and good in every other way.

Mr. J. H. Williams was third with two varieties—Free Gallipoli and Nabawa. In both cases the seed had been dry pickled, and was sown at the rate of 80 lb. per acre in mid June.

The awards together with the combined awards for fallow and crop, 1928–9, are as follows:—

Crop Section.

Name.	Variety.	Seed.	Super.	Pickle.	Estimated Yield.	Trueness to Type.	Disease.	Weeds.	Evenness.	Totals. Crop.	Totals. Fallow.	Grand Total.
		lb.	lb.									
Watson, S. P., and Sons	F. Gallipoli ..	55	90	F	30	18	12	14	14	88	93	181
Williams, J. H.	F. Gallipoli ..	80	112	D	23	18	14	12	14	81	96½	177½
	Nabawa ..											
Newell, C. J.(A) ..	Rance ..	60	115	F	22	18	14	14	14	82	94	176
Brydon, G. D. ..	Rajah ..	60	75	D	18	18	14	14	14	78	96	174
Sayers, H. L. ..	Dollar ..	48	90	D	15	18	14	14	14	75	96	171
Kelly, D.	F. Gallipoli ..	65	112	F	15	18	12	14	14	73	96½	169½
Hucker, J. L. ..	F. Gallipoli ..	65	90	D	10	18	13	13	13	67	97½	164½
Winfield, N. A. ..	Penny ..	56	70	D	15	18	13	14	12	72	90	162
Kent, W. H.	F. Gallipoli ..	55	60	D	The season had so affected these crops that marks could not be allotted.							
	Sepoy ..											
Newell, C. J.(B)	Rance ..	60	90	F								
	Joffre ..	65	..	..								

HIDE AND SKIN INDUSTRY.

During the last few years the domestic live-stock population of the world has increased, an apparently reliable estimate giving the present totals as 585,000,000 cattle, 525,000,000 sheep, and 100,000,000 goats. (The goats show a small decline.) Some 40 to 50 per cent. of the cattle and sheep, and nearly all the goats, are raised within the Empire, which, regarded as a unit, is by far the largest producer of live-stock in the world. A somewhat curious fact is that while the live-stock population of the world has grown, there has not been a proportionate increase in the production of hides and skins, which appear to have been in smaller supply, particularly cattle hides. Indeed, in the period between the summer of 1927 and the spring of 1928, there was such a shortage of hides that prices advanced by 50 per cent., although there was no exceptional demand for leather at that time.

Various reasons have been advanced for the apparent shortage of hides. It has been said that the meat-eating nations are eating less meat than formerly, and consequently there is a smaller slaughter of cattle. Another explanation is that great depletions of stock took place during the War, and for some years afterwards very little was done

in the way of replenishment; now, it is asserted, breeders are building up their stocks again, and are encouraged to do so because the prices they have been receiving for their cattle have not been very attractive.

An Open Market.

While the Empire produces such a large proportion of the world's gross output of hides and skins, it does not by any means follow that the bulk of its production is used and converted into leather in the Empire. Except in a few countries, hides and skins have an open market and supplies flow in any direction, according to demand. For instance, Great Britain is the second largest leather producing country in the world, and could probably consume—on the face of things, and in conjunction with Canada, Australia, South Africa, and India—every hide and skin produced within the Empire. Actually not more than about one-half of the total amount of leather produced in Great Britain is made from Empire raw material, the character of the production forcing large purchases of suitable material from foreign sources. This is not necessarily a detrimental feature, for the market being open, the hides and skins gravitate naturally to the centres where the demand is strongest and the financial return, therefore, the best.

There are three varieties of hides and skins, alike for cattle hides and sheep and goat skins, namely, green or fresh, wet-salted, and dry or dry-salted. The geographical limits of production of each type are fairly easy to define. Green or fresh hides are peculiar to the United Kingdom, where the annual output of about 2,500,000 hides—with the exception of some 500,000 that are exported to the Continent and the United States—goes direct from the markets to the tanneries; they may or may not have just a slight sprinkling of salt. Wet-salted hides, are, within the Empire, the product chiefly of Australia, New Zealand, and South Africa, while dry and dry-salted hides come mainly from India, South Africa, West Africa, East Africa, Australia, and the Straits Settlements. Shipments from the East contain a fair proportion of buffalo hides. Canada is credited with producing about 2,000,000 hides and calfskins annually, practically all of which are absorbed within the Dominion.

With the exception of Great Britain and Canada, the countries of the Empire export the greater portion of their hide and skin production. Of the gross annual production in Empire countries of about 32,000,000 hides, at least 22,000,000 are exported in raw or rough tanned condition; of an approximate output of 34,000,000 goatskins, over 26,000,000 are exported: and of her estimated production of 58,000,000 sheepskins, some 30,000,000, a considerable proportion of the exports being to other countries within the Empire, particularly Great Britain.

An Explanation.

A comparison of the figures for live-stock given in the first paragraph with the supply of hides and skins suggests a leakage in the cattle category, and it is probable there is such a leakage in African countries and in India. It is possible that some millions of animals of poor condition die, and the value of the skins being too small to make it worth while to flay the animals, they are left to rot.

It is very fitting that while foreign countries are important buyers of most kinds of Empire-produced hides and skins, the United Kingdom should be by far the largest single buyer. Imports into the United Kingdom during 1928 of these Empire products only were as follows:—Wet-salted hides, £745,000; dry hides, £2,300,000; sheep skins and pelts, £3,174,000; goatskins, £1,369,000; rough tanned kips, £3,859,000; rough tanned goat, £1,748,000; and rough tanned sheep, £1,458,000. Of the total of something over £14,000,000, goods to the value of approximately £4,000,000 were resold, largely through the medium of the Mincing-lane sales, and sent abroad, the balance being retained here for manufacture into leather. Some contributors to the foregoing totals were:—

Wet-salted hides: South Africa, £260,000; Australia, £108,000; and New Zealand, £77,000.

Dry and dry-salted hides: South Africa, £1,248,000; India, £376,000; Australia, £248,000; Nigeria, £117,000; and the Straits Settlements, £97,000.

Sheepskins: Australia, £1,462,000; South Africa, £1,065,000; New Zealand, £572,000; and Nigeria, £35,000.

Goatskins: India, £863,000; South Africa, £210,000; and Nigeria, £110,000.

In the rough tanned goods, India supplied practically all the kips, goats and sheep, accounting for about £6,700,000 out of total Empire purchases of these goods of some £7,050,000.

In the Empire Products Number published with the *Times Trade and Engineering Supplement* on the 26th May last year, the writer laid stress upon the severe loss which falls upon the trade, and especially upon producers and shippers overseas, by reason of the many faults in the treatment of hides and skins. Particularly to be mentioned are the faults of flay, pattern, and cure. It has been estimated that these losses, which are quite preventable, amount annually to many millions of pounds sterling. This point requires to be emphasized again. Improvement comes very slowly, and it seems strangely difficult to convince the peasants, farmers, and butchers abroad that they would get much more money for their hides and skins if they would only use average thought and care in taking them off carcasses and in preserving them. Hides with holes through them, with the flesh cut in all directions, or damaged by heating, are of little use for making leather, and because tanners by this time know which are the bad districts, the prices they are willing to pay for hides from these areas is low, and will remain low until the character of the deliveries is very greatly improved.

Faults in Drying.

Dry hides are generally more neglected than salted. Drying in the sun is still practised instead of in the shade. Even when the hides are dried in the shade care is not always taken to see that the hides are thoroughly dried before they are taken down. When hides are dried in the sun in a tropical country, portions of the hide substance are converted into glue. Such hides are worthless to a tanner. The glue

portions will dissolve while the hide is being tanned, leaving holes only. When drying in the shade, care should be taken that the hide is dried right through. It may appear dry on both sides, but contain moisture inside; putrefaction will ensue, and the result will be that the grain will separate from the flesh, valuable material thus being made quite worthless. Another not uncommon fault is to put arsenicated hides into bales or piles before the hides have been thoroughly dried after dipping. This causes heating, which results in damaged grain and other faults.

Still worse, because it is fraudulent, is weighting. Hides are sold usually by weight, and dishonest dealers attempt to increase their returns by adding weight to the hides. Sometimes clay will be smeared over the flesh side of dry hides, and salted hides may be watered. At present, South African hides have acquired a bad name because certain dealers have been watering, or "poisoning," their hides. The moisture evaporates in transit, and the resultant loss in weight has become so serious that European buyers are refusing to buy except upon "landed weights." Such a practice reacts upon the whole trade, the honest dealer having to suffer with his shady neighbour. The cumulative result is a decided slump in prices for South African hides on the European market.

The writer has referred to this matter because it is one to which too much attention cannot be given. The whole subject of the flay and preservation of hides and skins is of the greatest importance to producers or collectors. If proper methods were adopted and ordinary care used, the industry would be the richer by some millions of pounds every year.

—Reprinted from the British Empire Products Number of the *Times Trade and Engineering Supplement.*

STANDARD HERD RECORDS

for Quarter ended 30th September, 1929.

In the following is set out the records of all cows which completed a lactation during the quarter. The number is 521, of which 359 qualify for the certificate.

The amount of butter fat required for qualification varies according to the age of the animal (up to 5 years at time of calving), the standards being as follow:—

Junior 2 year old (under 2½ years at time of calving) .. .. .. 200 lb. butter fat.
Senior 2 year old (between 2½ and 3 years at time of calving) .. .. 225 lb. butter fat.
Junior 3 year old (between 3 and 3½ years at time of calving) .. .. 250 lb. butter fat.
Senior 3 year old (between 3½ and 4 years at time of calving) .. .. 275 lb. butter fat.
Junior 4 year old (between 4 and 4½ years at time of calving) .. .. 300 lb. butter fat.
Senior 4 year old (between 4½ and 5 years at time of calving) .. .. 325 lb. butter fat.
Mature cow 5 years and over .. .. 350 lb. butter fat.

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
W. H. Adams, Amey's Track, via Foster	2	..	Ayrshire	Poppy of Sparrovale ..	Mature	9106	15.10.28	273	20	9,047	3·74	338·31	350	255, 368, 335, 406
				Sunnyside Grace 2nd ..	Sr. 3 yrs	16776	25.10.28	273	11	5,552	3·85	213·79	275	
N. B. Alston, Romsey	2	2	Jersey ..	Bonnie Annie of Aberdour..	Mature	12849	19.10.28	273	15½	8,784	4·95	434·87	350	227, 323, 301
				Romany Rose of Aberdour ..	Jr. 3 yrs	Vol. 16	19.11.28	273	14	6,240	6·27	391·43	250	
J. Anderson, jr., Lyndhurst	4	3	Jersey ..	King's Vale Brunette 23rd ..	Jr. 2 yrs.	24205	6.10.28	273	12½	4,823	5·43	261·88	200	
				Canary 16th of King's Vale ..	Mature	14115	28.10.28	273	10	5,177	5·65	292·36	350	290
				Linda 69th of King's Vale ..	Jr. 3 yrs.	21087	30.10.28	273	13½	5,580	5·25	292·93	250	274
				Rosella 11th of King's Vale ..	Mature	16591	28.11.28	273	17½	7,373	6·17	454·97	350	336, 318
L. R. Archibald, Tongala	1	1	Jersey ..	Mayfield Park Lady Betty ..	Jr. 2 yrs.	24216	12.12.28	273	..	4,394	5·53	242·96	200	

STANDARD HERD RECORDS—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
W. H. Atherton, Murraydale	4	3	Jersey ..	Empress of Beverley ..	Jr. 4 yrs.	18607	3.10.28	273	..	5,276	5·55	292·60	300	372, 310
				Mythic of Beverley ..	Jr. 4 yrs.	18608	3.10.28	273	..	4,802	6·27	301·28	300	330, 361
				Tiny of Meadowvale ..	Mature	9409	17.10.28	273	11	6,603	5·31	350·60	350	374, 361, 298, 461, 486, 468, 379
				Quality's Cream Lassie of Beverley	Sr. 3 yrs.	18609	1.11.28	273	..	6,626	5·17	342·59	275	
W. K. Atkinson, Swan Hill	9	7	Milking Shorthorn	Countess 2nd of Willow Park	Mature	Not yet allotted.	18.10.28	273	5½	5,792	4·57	264·52	350	257, 300
				Damsel of Willow Park ..	Mature	13408	4.11.28	273	..	13,038	4·13	538·20	350	338, 409, 452, 380, 439
				Butterfly of Willow Park ..	Mature	13201	16.11.28	273	7	8,485	4·19	355·67	350	301
				Countess of Willow Park ..	Mature	9250	17.11.28	273	..	8,946	4·39	392·56	350	264, 330, 382, 359, 342, 383, 406, 358
				Princess of Willow Park ..	Mature	12510	25.11.28	273	..	9,626	3·97	382·19	350	256, 368, 370, 346, 407, 410, 397
				Dulcie 2nd of Willow Park ..	Jr. 3 yrs.	..	11.12.28	273	23½	10,076	3·59	362·13	250	320
				Duchess 8th of Willow Park	Sr. 2 yrs.	..	17.12.28	273	19	6,248	4·40	275·06	225	237
				Dainty 2nd of Willow Park ..	Jr. 3 yrs.	..	22.12.28	273	25	8,498	4·03	342·20	250	258
				Queenie 6th of Willow Park ..	Mature	..	25.12.28	210	4	3,750	4·34	162·88	350	280, 284
F. Austin, Lara	2	2	Jersey ..	Mercedes Belle of Avalon ..	Mature	12863	26.10.28	273	30	9,701	5·08	493·07	350	291, 335, 422, 436, 495
				Avalon Noble's Beauty 2nd ..	Jr. 2 yrs.	Vol. 16	17.12.28	273	14½	5,567	6·65	370·27	200	
W. H. Axford, Camperdown	7	7	Jersey ..	Leura Beauty 3rd	Jr. 2 yrs.	24230	9.10.28	273	16	5,696	5·67	323·21	200	
				Beauty of Leura	Sr. 3 yrs.	18619	10.10.28	273	20½	8,565	4·75	406·87	275	396
				Leura Elaine 2nd	Jr. 2 yrs.	24233	11.10.28	273	12	5,234	6·09	318·81	200	
				Leura Rarity 2nd	Jr. 2 yrs.	24240	11.10.28	273	19½	5,408	5·63	304·27	200	
				May 2nd of Leura	Jr 3 yrs.	21102	7.11.28	210	4	5,675	5·46	309·85	250	
				Leura Patricia 3rd	Jr. 2 yrs.	24238	3.12.28	273	19	6,186	5·23	323·41	200	
				Leura Lady Elector 3rd ..	Jr. 2 yrs.	24236	3.12.28	273	18	5,708	5·83	332·89	200	

Standard Herd Records—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
Ballarat Orphanage	1	..	Jersey ..	Dunallister Peeree's Quick Sand	Mature	9633	14.10.28	273	18½	6,722	4·93	331·06	350	304
A. V. Becher, Welshpool	6	3	Friesian	Braeside Ashlynn	Sr. 2 yrs.	Vol. 10	22.10.28	273	15½	6,347	3·54	224·75	225	
				Burnbank Inka Sylvia Walulu	Mature	1208	27.10.28	273	32	14,685	3.85	565·17	350	188, 270
				Braeside De Kol	Jr. 2 yrs.	Vol. 10	11.11.28	273	14	7,008	3·67	259·56	200	
				Braeside Primula	Sr. 2 yrs.	Vol. 10	15.11.28	273	12	6,384	3·66	233·64	225	
				Braeside Princess Ashlynn ..	Sr. 4 yrs.	2110	18.11.28	273	16	8,213	3·42	280·71	325	
				Walulu Abbekirk Artis of Corfield	Mature	550	26.12.28	273	22	9,546	2·84	271·16	350	188, 215, 256
F. Bidgood, Wodonga	3	3	Jersey ..	Staghorn Una	Jr. 4 yrs.	18447	9.10.28	273	23½	7,624	5·86	447·12	300	
				Beauty of Staghorn ..	Mature	11251	23.10.28	273	23½	9,393	5·48	514·40	350	223, 289, 334, 367, 483
				Staghorn's Masterlarks Laburnum	Jr. 3 yrs.	22979	5.12.28	273	26½	8,396	5·65	474·55	250	
Mrs. A. Black, Noorat	2	2	Jersey ..	Melody 2nd of Warenda ..	Mature	15017	20.10.28	273	20½	9,015	5·84	526·09	350	420, 265, 445
				Noorat Gossamer	Mature	16217	27.10.28	273	12	7,272	5·41	393·67	350	274, 305, 460
J. S. Black, Noorat Home Farm	3	2	Ayrshire	Posy of Ben Kell	Mature	12729	30.9.28	240	4	7,860	3·98	313·12	350	213, 345, 333
				Bow Bell of Ben Kell ..	Sr. 3 yrs.	14081	5.10.28	273	18	8,067	4·13	333·13	275	210, 271
				Ben Kell Pandora	Jr. 2 yrs.	15732	14.12.28	273	21½	6,860	4·32	296·24	200	
S. Bolton, Mannerim	1	1	Jersey ..	Glenmavis Surprise ..	Jr. 2 yrs.	24270	1.11.28	273	18	4,691	4·99	234·30	200	
A. A. Broad, Sutton Grange	3	3	Jersey ..	Grangelea Primrose ..	Sr. 2 yrs.	23007	10.10.28	273	24	8,366	5·52	462·00	225	370
				Grangelea Bunty 2nd ..	Sr. 2 yrs.	24272	10.11.28	273	17	5,673	6·29	357·02	225	
				Princess 4th of Grangelea ..	Mature	15455	20.11.28	273	25½	9,104	5·58	508·00	350	312, 429, 454, 435

STANDARD HERD RECORDS—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
Messrs. Cameron and Son, Valencia Creek	2	2	Jersey ..	Studleigh Dianthus 3rd ..	Jr. 2 yrs.	Vol. 16	14.10.28	273	16½	5,712	5·51	314·74	200	
				Studleigh Duchess 3rd ..	Jr. 2 yrs.	Vol. 16	13.11.28	273	15	5,114	6·14	313·89	200	
J. Canobio, Bena	4	3	Ayrshire	Glen Erin Fortune	Jr. 2 yrs.	16195	27.9.28	273	16	7,356	4·35	319·77	200	
				Wave of Glen Erin ..	Mature	10888	27.10.28	273	12	7,994	3·58	286·19	350	
				Glen Erin Dawn	Jr. 2 yrs.	16194	26.11.28	273	12	6,281	4·12	259·02	200	
				Glen Erin Winsome ..	Jr. 2 yrs.	16199	20.12.28	273	20	6,134	3·59	220·34	200	
W. C. Cayley, Werribee	5	4	Ayrshire	Masie of Sunnyside ..	Mature	12991	10.10.28	273	13	8,003	4·11	328.54	350	
				Joy Queen of Riversdale ..	Mature	13304	1.11.28	273	29	13,214	4·57	603·43	350	414, 514
				Riversdale Madge	Jr. 2 yrs.	18880	27.11.28	273	10	6,795	4·13	280·49	200	
				Riversdale Modesty ..	Sr. 2 yrs.	16570	27.11.28	273	8½	6,941	4·07	282·17	225	
				Sparrovale Trefoil	Jr. 4 yrs.	16706	20.12.28	273	13	9,219	4·34	399·75	300	288, 335
J. E. Chadderton, Hamilton	1	...	Jersey ..	Glen Leigh Dulcie	Jr. 2 yrs.	24286	18.11.28	273	18½	3,608	5·33	192·28	200	
J. Charlton, Stony Creek	1	1	Jersey ..	Boronia of Lumeah.. ..	Mature	13705	8.10.28	273	18½	9,577	5·33	510·75	350	458, 512
Cpt. J. P. Chirnside, Oakleigh	2	2	Jersey ..	Werribee Island Fancy Madeira 2nd	Mature	16228	16.10.28½	273	24	9,563¼	5·37¼	513·37	350	
				Werribee Island Fancy ..	Mature	13202	20.10.28	273	21½	7,211	5·74	413·71	350	434, 504
R. M. Chirnside, Whittlesea	2	2	Jersey ..	Air Girlie of The Falls ..	Jr. 3 yrs.	21583	28.9.28	273	10	5,295	6·19	327·94	250	
				Austral Valley Sweet Stella ..	Sr. 3 yrs.	23284	21.10.28	273	20	6,510	5·71	371·63	275	

STANDARD HERD RECORDS—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
C. Chitty, Kernot	6	4	Jersey ..	Nancy of Meridale	Sr. 4 yrs.	16366	29.9.28	273	5½	4,680	5·83	273·01	325	
				Golden Girl of Targoora ..	Mature	9294	2.10.28	273	12	6,194	4·77	295·32	350	
				Ewelme Girl	Mature	15467	15.10.28	273	12¾	7,424	6·72	499·06	350	
				Glen Iris Brown Rose ..	Jr. 2 yrs.	Vol. 16	15.11.28	273	7½	4,632	6·67	309·08	200	
				Holly of Meridale	Mature	16365	29.11.28	273	12	6,648	5·58	370·86	350	
				Evelina Redlight's Rosebud ..	Jr. 2 yrs.	C.R.	17.12.28	273	9	4,422	6·32	279·40	200	
W. J. Clark, Monomeith	2	2	Jersey ..	Koomangoonong Lady Diana	Mature	16344	10.10.28	273	20	9,933	5·72	568·19	350	
				Koomangoonong Lady Betty	Mature	16343	28.11.28	273	5	7,878	5·24	413·03	350	
				Re May Song of Warenda*										
R. C. Clymo, Bamawn	3	3	Ayrshire	Esteem of Gleneira	Mature	9732	11.10.28	273	12½	8,352	4·45	371·33	350	
				Omakaw Heath	Jr. 2 yrs.	Vol. 22	17.10.28	273	15	5,337	4·35	232·06	200	
				Nindethana Esme	Jr. 2 yrs.	Vol. 22	18.10.28	273	11	5,058	4·14	209·48	200	
J. Clyne, Upper Maffra West	7	6	Jersey ..	Paisley Cora Lea	Jr. 2 yrs.	Vol. 16	29.9.28	273	12½	3,800	6·28	238·82	200	
				Poppy 2nd of Swansea ..	Jr. 3 yrs.	21197	29.10.28	273	17½	6,569	5·19	340·86	250	
				Swansea Fuchsia 3rd ..	Jr. 2 yrs.	34299	4.11.28	273	18	6,473	4·89	316·34	200	
				Cora of Paisley	Jr. 4 yrs.	17720	13.11.28	273	13	6,774	5·44	368·20	300	302, 401
				Flossie of Swansea	Sr. 2 yrs.	21189	27.11.28	273	16	5,523	5·65	312·24	225	
				Playhour of Swansea ..	Sr. 2 yrs.	21196	19.12.28	273	12	5,160	6·25	322·59	225	200
				Paisley Peach	Jr. 2 yrs.	Vol. 16	25.12.28	273	15	4,176	4·54	189·76	200	
Messrs. Cockbill Bros., Rockbank	9	..	Ayrshire	Oakbank Bide-a-wee ..	Mature	15210	14.10.28	273	20	7,048	4·35	306·88	350	
				Fulham Beauty	Mature	10902	15.10.28	273	11	6,084	3.73	226·91	350	225, 325, 266
				Oakbank Become	Sr. 3 yrs.	15204	28.10.28	273	10	5,158	4·26	219·56	275	
				Fulham Gaiety	Mature	13334	13.11.28	273	13	4,412	4·13	182·33	350	312, 282
				Oakbank Rosetime ..	Jr. 4 yrs.	15316	15.11.28	273	7	4,629	4·23	195·90	300	
				Fulham Vanity	Mature	10920	30.11.28	273	17	6,668	4·73	315·38	350	315, 426, 362
				Cora of Burnside	Mature	8894	6.12.28	273	17	7,730	4·30	332·42	350	182, 125, 347, 373, 359, 468
				Fulham Valetta	Mature	10919	10.12.28	273	18	6,584	4·83	318·29	350	344, 345
				Fulham Verose	Mature	13339	13.12.28	273	17	7,149	4·29	306·41	350	396, 272, 167

* *Erratum*—The owner of No. 7, "May Song of Warenda," 533 lb. fat, Junr. 4th Class in Order of Merit, 1928-29, should read W. J. Clark instead of T. Mesley.

Standard Herd Records—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
T. A. P. Coombes, Tongala	1	1	Jersey ..	Ivinghoe Patricia	Jr 2 yrs	Vol. 16	25.11.28	273	16½	6,114	5·58	341·34	200	
D. E. Cook, Lock	3	3	Jersey ..	Fairy Queen of Blackwood Valley	Mature	17418	9.10.28	273	6½	5,954	6·02	358·53	350	251, 312, 299
				Modesta Olive	Jr. 3 yrs.	Vol. 16	25.10.28	273	4	5,418	5·79	313·69	250	259
				Olive Branch of Banyule ..	Mature	7126	10.12.28	273	15	6,492	4·91	318·49	350	257, 310
H. A. Cooper, Trafalgar	2	2	Jersey ..	Burnside Alfalfa	Sr. 2 yrs.	24310	7.10.28	273	12	6,371	4·92	313·35	225	
				Glenlock Pearl	Jr. 2 yrs.	23043	28.10.28	273	15½	5,590	5·97	333·52	200	
C. Coughlin, Yannathan	1	1	Jersey ..	Willis Vale King's Golden ..	Jr. 2 yrs.	23355	18.10.28	273	12	5,870	5·03	295·51	200	
H. Cowling, Mornington	4	4	Jersey ..	Edmonton Fuchsia 4th ..	Jr. 3 yrs.	23046	9.10.28	273	19	7,445	5·39	401·40	250	308
				Trixie Lass of Edmonton ..	Jr. 4 yrs.	23049	17.10.28	273	14	6,627	6·04	400·13	300	332, 394
				Edmonton Fuchsia 5th ..	Jr. 2 yrs.	24314	23.10.28	273	17½	5,888	6·42	378·22	200	
				Chevy 13th of Melrose ..	Mature	11775	10.11.28	273	23½	9,844	5·44	535·23	350	285, 396, 493, 419
A. Cox, Kyabram	2	1	Jersey ..	Audrey's Melba of Tavistock	Sr. 4 yrs.	18454	14.10.28	273	6	6,436	5·36	344·68	325	
				Audrey's Duchess of Tavistock	Jr. 4 yrs.	21208	20.10.28	273	5½	5,710	5·02	286·55	300	
E. E Davis, Bass	2	2	Jersey ..	Passable of Blackwood Grove	Jr. 2 yrs.	24322	6.10.28	273	14	5,101	5·13	261·72	200	
				Doreen of Blackwood Grove	Jr. 2 yrs.	24320	7.10.28	273	16	5,507	5·22	287·38	200	
E. Day, Penshurst	3	3	Jersey ..	View Point Golden Bright ..	Jr. 2 yrs.	24326	13.10.28	273	11½	4,734	5·56	263·17	200	
				Midnight of Clover Flat ..	Mature	7445	19.10.28	273	21½	8,206	5·31	435·75	350	446, 492, 468
				View Point Duchess ..	Jr. 2 yrs.	24325	8.12.28	273	17½	5,105	6·15	314·01	200	

Standard Herd Records—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
T. G. Dellar, Portland	1	1	Jersey ..	Namesake 3rd of Warenda ..	Mature	15018	17.10.28	273	16	7,824	5·54	433·17	350	391, 485
Department of Agriculture, Burnley	1	..	Jersey ..	Victoria Beauteous ..	Mature	10198	20.10.28	273	8½	4,446	6·22	276·38	350	272, 412, 367, 321, 313
Department of Agriculture, Werribee Research Farm	3	2	Friesian	Victoria Lean Patch ..	Mature	1705	7.10.28	273	14½	14,145	3·58	506·48	350	326, 306, 577
				Victoria Pattibelle	Mature	1707	9.10.28	273	13½	8,606	3·64	313·30	350	274
				Victoria Carina	Sr. 4 yrs.	2065	22.12.28	273	23	10,639	3·67	390·92	325	335, 349
Department of Agriculture, Werribee Research Farm	6	5	Red Poll	Victoria Velbelle	Mature	966AA	29.9.28	273	13	7,650	4·16	317·88	350	251, 339
				Victoria Cutaway	Mature	1241B	29.9.28	273	19½	8,307	4·29	356·35	350	248, 300
				Victoria Cutty Spark ..	Sr. 2 yrs.	1756B	3.10.28	273	22	8,987	4·46	400·90	225	
				Victoria Euphrates ..	Mature	716A	3.11.28	273	24½	9,695	4·07	394·36	350	247, 326
				Cutty Sark	Mature	383C	5.12.28	273	19½	10,697	3·92	419·38	350	373, 424, 373, 376, 440, 356, 358
				Victoria La Regal	Mature	718A	27.12.28	273	26	8,953	3·95	353·27	350	320, 437
J. J. Desmond, Rochester	6	6	Jersey ..	Preston Farm Lass ..	Jr. 2 yrs.	Vol. 16	1.11.28	273	19½	6,710	4·87	327·11	200	
				Preston Countess 2nd ..	Jr. 2 yrs.	Vol. 16	11.11.28	273	19	6,209	4·49	278·93	200	
				Preston Collarette	Jr. 2 yrs.	Vol. 16	12.11.28	273	17½	4,793	4·90	234·84	200	
				Preston Mayday	Jr. 2 yrs.	Vol. 16	15·11·28	273	..	6,029	5·17	311·82	200	
				Love Bird	Mature	4885	25.11.28	273	..	6,710	6·07	407·18	350	
				Eurungee Graceful Duchess..	Sr. 2 yrs.	23268	27.12.28	273	22	6,351	5·80	368·56	225	
Messrs. Dickinson Bros., Sebastopol	1	1	Friesian	Ashby Phyllis 5th	Mature	1171	20.11.28	271	4	10,838	3·25	352·45	350	308, 312, 370

Standard Herd Records—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
R. J. M. Dobson, Acheron	1	1	Jersey ..	Wattle Grove Junee ..	Jr. 2 yrs.	23110	14.10.28	273	12½	5,426	5·89	319·84	200	
T. S. Dowson, Powlett River	2	2	Jersey ..	Riverbank Caroline 2nd ..	Jr. 2 yrs.	Vol. 16	7.10.28	273	..	4,860	6·23	302·59	200	
				Riverbank Phyllis ..	Sr. 2 yrs.	C.R.	1.11.28	273	..	6,031	5·38	324·22	225	
P. J. Ducat and Sons, Ardmona	5	3	Jersey ..	Airlie Beauty 2nd	Jr. 2 yrs.	Vol. 16	4.10.28	273	13½	5,249	4·89	256·77	200	133
				Airlie Nita	Mature	Vol. 16	23.10.28	273	11	6,065	5·48	332·26	350	174
				Handsome Girl of Airlie ..	Sr. 3 yrs.	18696	10.11.28	273	16	5,921	5·46	323·50	275	247
				Buttercup of Airlie ..	Mature	10203	10.11.28	273	13	5,072	6·61	335·05	350	286, 370
				Beatrice 2nd of Goulburn ..	Mature	9159	14.11.28	273	16½	6,182	6·18	382·05	350	
Dunbar Bros., Carlsruhe	2	1	Friesian	Wimmera Mona	Sr. 3 yrs.	2331	8.11.28	273	9	8,493	3·42	290·74	275	
				Strathardle Sylvia Lulu ..	Sr. 4 yrs.	2053	15.12.28	273	11	8,984	2·80	251·76	325	
S. Earle, Merricks	2	1	Jersey ..	Hope of Benguella	Jr. 2 yrs.	Vol. 16	2.10.28	273	9½	4,848	4·96	240·66	200	
				Goldfield's Tragedy 5th ..	Jr. 3 yrs.	C.R.	28.11.28	273	14½	4,928	5·06	249·26	250	
A. J. Eldridge, Noorat	3	3	Friesian	St. Albans Cordyline Inka ..	Sr. 4 yrs.	2289	21.10.28	273	28	13,226	3·56	471·11	325	316, 363
				St. Albans Lily's Sylvia ..	Sr. 2 yrs.	2595	30.11.28	273	21½	8,913	4·14	369·02	225	329
				Burnbank Lady Patch ..	Jr. 3 yrs.	2696	8.12.28	273	32½	8,294	4·36	362·02	250	406
A. E. Ellis, Archie's Creek	4	4	Jersey ..	Beatrice of Holbrook ..	Mature	12903	3.10.28	273	13	6,992	5·38	376·19	350	295, 320, 413, 453
				Blackwood Grove Nancy ..	Jr. 3 yrs.	23123	17.10.28	273	4	4,646	5·64	261·81	250	296
				Blackwood Grove Mandy ..	Sr. 2 yrs.	23121	21.10.28	273	22	6,822	5·41	368·82	225	317
				Glen Iris Mistress Mary ..	Jr. 2 yrs.	C.R.	3.12.28	273	15	5,851	6·08	355·99	200	

STANDARD HERD RECORDS—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
A. E. Enders, Stanhope	1	1	Friesian	Burnbank Fraulein Patch ..	Jr. 2 yrs.	Vol. 10	7.12.28	273	35½	13,416	3·43	459·52	200	
N. H. Enders, Stanhope	5	5	Jersey ..	The Wattles Dorothy ..	Sr. 3 yrs.	Vol. 16	3.10.28	273	27½	9,614	5·21	501·29	275	300
				The Wattles Princess Elizabeth	Jr. 2 yrs.	Vol. 16	12.10.28	273	..	5,558	5·30	294·84	200	
				Princess of the Wattles	Jr. 3 yrs.	21265	24.11.28	273	14	7,050	5·59	393·93	250	271, 286
				Myra of the Wattles ..	Mature	12917	25.11.28	273	24½	12,493	4·95	618·56	350	592
				The Wattles Tulip	Jr. 2 yrs.	Vol. 16	18.12.28	273	18	5,771	5·91	341·33	200	
G. Esler, Tongala	6	5	Jersey ..	Jubilee Thyme	Mature	14149	25.10.28	273	16	8,924	5·35	477·67	350	356, 366, 509, 369
				Maiwand Daisy	Jr. 2 yrs.	Vol. 16	28.10.28	273	12½	6,939	5·33	369·98	200	
				Jubilee Lily	Mature	10454	29.10.28	240	4	5,475	5·00	273·49	350	332, 326, 348, 358, 348
				Maiwand Flirt	Jr. 2 yrs.	Vol. 16	2.11.28	273	10	5,138	5·72	293·64	200	
				Maiwand Queenie	Jr. 2 yrs.	Vol. 16	27.11.28	273	7	4.033	5·41	218·22	200	
				Linda of Tuerong	Mature	10482	27.11.28	273	4½	7,894	4·57	361·03	350	219, 217, 269, 341, 302, 253
A. Evans, Heywood	3	2	Jersey ..	Boronia Farm Virginia ..	Jr. 2 yrs.	23130	8.10.28	273	8	3,873	4·88	189·16	200	
				Boronia Farm Queenie ..	Jr. 3 yrs.	21267	5.11.28	273	..	4,050	6·46	261·74	250	
				Boronia Farm May ..	Jr. 2 yrs.	23129	21.12.28	273	14½	4,716	5·00	235·95	200	
T. R. Findlay, Leitchville	2	1	Jersey ..	Twylish Countess of Leven Brae	Mature	16641	19.12.28	273	..	6,300	4·62	291·06	350	215, 317, 299, 322
				Leven Brae Fancy Madeira ..	Jr. 2 yrs.	Vol. 16	25.12.28	273	14½	5,369	4·46	239·64	200	
A. Fixter, Boisdale	2	1	Guernsey	Daphne of Mincha Vale ..	Jr. 4 yrs.	Vol. 8	1.11.28	273	15	6,271	5·52	346·18	300	
				Daffodil's Heiress of Mincha Vale	Mature	822	24.12.28	273	13½	4,887	5·50	268·96	350	
W. Fixter and Son, Boisdale	2	1	Jersey ..	Music of Olivedale	Sr. 4 yrs.	21281	3.11.28	240	4	4,165	4·39	182·92	325	208, 144
				Studleigh Duchess 4th ..	Jr. 2 yrs.	Vol. 16	25.12.28	273	14½	4,934	5·54	273·51	200	

STANDARD HERD RECORDS—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
Foster Bros., Boisdale	7	7	Jersey ..	Kirkhill Joan	Jr. 2 yrs.	24508	28.9.28	273	13	4,979	5·36	266·66	200	
				Staghorn Master's Beauty ..	Jr. 2 yrs.	23148	29.9.28	273	17	6,219	5·16	321·20	200	
				Dolly 4th of King's Vale ..	Mature	16583	12.10.28	273	15	7,862	5·48	430·74	350	312, 308, 373
				Ballara Madeira	Jr. 2 yrs.	23145	26.10.28	273	13½	5,412	5·58	301·72	200	
				Brunette 22nd of King's Vale	Sr. 2 yrs.	21084	10.11.28	273	19½	6,354	6·41	407·34	225	309
				Brunette 18th of King's Vale	Sr. 4 yrs.	16581	12.11.28	273	14½	6,473	6·25	404·59	325	256, 348
				Jerseyholm Sparkle 11th ..	Jr. 2 yrs.	23146	12.12.28	273	18	5,838	6·82	398·41	200	
Mrs. M. and W. A. Francis, Kilcunda	3	..	Ayrshire	Rosebud of Hillcrest ..	Mature	9080	27.9.28	273	10½	7,315	4·09	299·31	350	163, 194, 250, 250, 290
				Rosie of Hillcrest	Jr. 4 yrs.	13470	19.11.28	240	4	5,550	4·10	227·40	300	243
				Hillcrest Peeress	Jr. 2 yrs.	18252	8.12.28	273	6½	3,698	4·96	183·26	200	
Mrs. G. Gange, Werribee	1	1	Ayrshire	Roseleigh Rosebloom ..	Jr. 3 yrs.	16582	1.10.28	210*	20	6,200	4·28	265·10	250	257
N. R. Gange, Berrybank	3	..	Ayrshire	Lena of River Glen ..	Mature	14813	16.10.28	240	4	6,785	4·27	289·70	350	333
				River Glen Melba	Jr. 2 yrs.	20684	23.10.28	273	8	3,799	4·34	164·72	200	
				River Glen Alvie	Jr. 2 yrs.	16563	6.11.28	210	4	2,900	4·50	130·37	200	
J. L. Gardener, Welshpool	1	..	Jersey ..	Brown Belle of Whare Koa ..	Mature	14151	14.12.28	273	16	5,256	5·72	300·66	350	304, 341, 343, 299
Gibson Bros., Trafalgar	4	4	Jersey ..	Leathorne Peeress	Jr. 2 yrs.	24370	11.10.28	273	11	4,062	6·11	248·18	200	
				Leathorne Creamy 3rd ..	Jr. 2 yrs.	Vol. 16	14.10.28	273	14½	4,644	5·60	259·97	200	
				Annie Laurie of Leathorne ..	Mature	16270	14.10.28	273	16½	6,765	5·61	379·64	350	302, 307, 407
				Glen Iris Montrose Love ..	Jr. 2 yrs.	24358	4.11.28	273	16½	5,865	4·83	283·47	200	

* Herd withdrawn temporarily.

Standard Herd Records—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
R. Goodman, Kilmany South	5	1	Ayrshire	Roseneath Clara	Jr. 2 yrs.	20703	28.9.28	240	4	4,380	3·98	174·30	200	
				Roseneath Agnes	Jr. 4 yrs.	16586	6.10.28	240	4	4,755	4·49	213·54	300	151
				Linda of Roseneath ..	Sr. 4 yrs.	20705	13.10.28	273	12	5,684	3·99	226·84	325	194
				Roseneath Nancy	Sr. 2 yrs.	Vol. 22	16.10.28	273	7	4,145	3·99	165·55	225	
				Oakbank Hoyle	Jr. 3 yrs.	18742	17.11.28	273	..	6,641	4·01	266·63	250	
A. W. Gorman, Alexandra	6	5	Ayrshire	Favourite of Cathcart ..	Mature	12141	1.10.28	273	17	8,589	4·65	399·43	350	254, 270, 290
				Hazeldine Cathcart ..	Jr. 2 yrs.	15865	15.10.28	273	16½	6,156	3·96	243·93	200	
				Muriel of Cathcart	Jr. 4 yrs.	13522	24.10.28	273	22	8,183	4·93	403·43	300	206, 298
				Ladylike of Cathcart ..	Mature	9143	25.10.28	273	14	8,505	4·07	346·27	350	269, 308, 283, 343
				Cathcart Mode's Last ..	Jr. 2 yrs.	17496	30.10.28	273	15	5,540	4·20	232·48	200	
				Cathcart Poppy	Jr. 2 yrs.	15868	10.12.28	273	16½	6,462	3·99	258·01	200	
F. W. J. Gread, Tongala	1	1	Jersey ..	Amwell Dainty	Jr. 2 yrs.	24374	21.10.28	273	22½	6,848	4·64	317·99	200	
E. Hall, Tongala	1	..	Jersey ..	The Valley Primrose 3rd ..	Jr. 3 yrs.	23175	24.12.28	273	8½	2,948	4·58	135·15	275	155
D. C. Harker, Caldermeade	3	..	Ayrshire	Coral 4th of Carracoorte ..	Mature	9337	6.10.28	273	5	7,977	4·17	332·77	350	242, 279, 279, 288, 286
				Poppy of Thirlmere ..	Mature	12211	7.10.28	240	4	6,545	4·44	290·40	350	223, 296
				Coral of Thirlmere	Mature	12210	24.12.28	273	5	5,295	4·13	218·78	350	191, 176
G. Harker, Yannathan	3	1	Ayrshire	Ayrgarth Avis	Jr. 2 yrs.	15701	16.10.28	273	9	4,359	4·16	181·17	200	
				Ayrgarth Clara	Jr. 2 yrs.	15702	16.10.28	273	10	4,740	4·65	220·33	200	
				Ayrgarth Countess	Sr. 3 yrs.	14900	29.11.28	240	4	3,765	4·20	158·15	275	

STANDARD HERD RECORDS—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
F. Harrison, Frankston	1	..	Jersey ..	Walbundry Beta	Sr. 2 yrs.	23201	19.12.28	273	6	2,998	6·79	203·63	225	
T. Harvey, Bolsdale	1	1	Jersey ..	Kirsty 16th of Jerseyholm ..	Jr. 4 yrs.	18736	27.10.28	273	..	7,784	5·85	455·36	300	351, 433
H. R. Heard, Derrinallum	1	..	Ayrshire	Letty of Cathcart	Mature	11076	1.10.28	210	4	3,765	3·66	137·94	350	242
W. Henderson, Grasmere Home Farm	17	12	Ayrshire	Viola 7th of Carracoorte ..	Sr. 4 yrs.	13636	27.9.28	273	10½	8,838	4·36	385·21	325	298, 396
				Carracoorte Balm 8th ..	Jr. 4 yrs.	17436	29.9.28	273	6	6,720	4·56	306·41	300	280
				Carracoorte Lucy 8th ..	Jr. 4 yrs.	15860	3.10.28	273	18½	7,503	4·55	341·65	300	214
				Sparrovale Jane	Sr. 2 yrs.	16666	6.10.28	273	21½	6,722	4·06	272·68	225	
				Carracoorte Minerva's Balm 9th	Jr. 2 yrs.	17472	8.10.28	150	4	3,195	4·38	139·90	200	
				Iris 6th of Carracoorte ..	Jr. 4 yrs.	15858	8.10.28	273	20	6,969	4·60	320·88	300	260
				Bunty 3rd of Carracoorte ..	Mature	9330	10.10.28	273	7½	8,256	4·43	365·97	350	208, 341, 389, 195, 312, 402
				Lena 3rd of Carracoorte ..	Mature	9396	10.10.28	273	8½	7,556	4·47	338·04	350	212, 178, 194, 300, 387
				Betsy 10th of Carracoorte ..	Mature	9320	10.10.28	273	18	8,465	4·21	356·00	350	238, 212, 238, 386
				Viola 2nd of Carracoorte ..	Mature	9452	10.10.28	240	4	8,085	4·43	358·07	350	207, 292, 355, 345, 372, 399
				Sparrovale Maiden	Jr. 2 yrs.	16676	12·10.28	273	20	6,635	4·10	271·79	200	
				Iris 4th of Carracoorte ..	Mature	9386	16.10.28	273	5½	8,843	4·56	403·43	350	251, 275, 265, 355, 423
				Brownie 13th of Carracoorte	Jr. 3 yrs.	15855	26.10.28	273	4	5,762	4·31	248·28	250	203
				Blanche of Carracoorte ..	Mature	9323	27.10.28	273	18½	9,324	3·98	370·78	350	271, 289, 252, 362, 374
				Lucy 7th of Carracoorte ..	Mature	13626	10.11.28	273	6	8,975	4·36	391·59	350	185, 447
				Sparrovale Echo	Mature	16655	19.11.28	273	14	7,635	3·58	273·16	350	200, 264
				Sparrovale Rowena.. ..	Sr. 4 yrs.	16706	27.11.28	90	4	3,690	3·97	146·64	325	225, 304

Standard Herd Records—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
W. Henderson, Grasmere Share Farm	6	..	Ayrshire	Bellona 7th of Carracoorte ..	Mature	17438	8.10.28	210	4	4,320	4·19	180·88	350	129, 144, 201
				Rosebloom 7th of Carracoorte	Mature	9438	9.10.28	240	4	6,195	4·32	267·67	350	171, 260, 239, 177, 215, 306
				Carracoorte Iris 7th ..	Jr. 4 yrs.	17465	10.10.28	180	4	4,125	4·14	170·80	300	202
				Betsy 17th of Carracoorte ..	Sr. 4 yrs.	17443	10.10.28	240	4	5,295	4·21	223·16	325	184
				Carracoorte Bloom 3rd ..	Jr. 2 yrs.	17449	27.10.28	273	12½	4,802	3·74	179·41	200	
				Dairylass 2nd of Carracoorte	Mature	9348	19.12.28	273	16	6,396	4·13	264·01	350	364, 246, 325
Mrs. A. J. Hitchens, Werribee	1	1	Jersey ..	Laane Flirt	Sr. 3 yrs.	23207	15.12.28	273	12	5,917	5·27	311·59	275	
L. W. C. Holbing, Tongala	2	2	Jersey ..	Eildon Vanilla	Jr. 2 yrs.	23215	27.11.28	273	13	4,369	5·03	219·88	200	
				Aveley Grevillea	Jr. 2 yrs.	Vol. 16	28.11.28	273	10½	4,863	6·69	325·24	200	
E. H. Howlett, Morwell	2	2	Jersey ..	Starfinch of Latrobe ..	Sr. 2 yrs.	21353	12.10.28	273	14	7,164	5·78	413·83	225	
				Latrobe Stella 4th	Jr. 2 yrs.	24402	21·10·28	273	6	5,477	4·73	258·99	200	
A. Hubbard, Yarra Glen	5	..	Ayrshire	Emoh Ruo Muriel ..	Sr. 2 yrs.	15980	27.9.28	273	9	4,337	4·51	195·65	225	
				Daisy of the Curragh ..	Mature	7670	15.10.28	210	4	6,450	3·86	248·80	350	332
				Modesty of Emoh Ruo ..	Sr. 4 yrs.	12260	2.11.28	240	4	5,835	4·67	272·39	325	225
				Purity of Emoh Ruo ..	Sr. 4 yrs.	12261	20.11.28	273	15	6,387	4·96	317·03	325	332
				Emoh Ruo Dimples ..	Jr. 3 yrs.	14944	15.12.28	273	5	3,903	4·27	166·50	250	
J. A. Huffer, Gormandale	4	4	Jersey ..	Sunny Brae Fancy Rose ..	Sr. 3 yrs.	21359	27.9.28	273	17	8,012	5·24	420·06	275	289, 388
				Waverley Lass of Glen Valley	Jr. 3 yrs.	21361	6.10.28	273	16½	6,530	5·22	340·66	250	290
				Rosebud's Peeree's Fancy of Glen Valley	Sr. 2 yrs.	21357	8.10.28	273	18	7,757	5·30	411·17	225	307
				Czarina of Glen Valley ..	Sr. 4 yrs.	18754	20.10.28	273	18	8,148	5·90	481·10	325	331, 399

STANDARD HERD RECORDS—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
W. H. Hurrey, Koonwarra	1	..	Jersey ..	Lulu 5th of Roelands ..	Mature	17438	4.11.28	273	9½	5,984	4·79	286·89	350	268, 377, 322
J. Hutchinson and Son, Somerville	2	2	Jersey ..	Empress of Somerville ..	Jr. 4 yrs.	17762	3.10.28	273	34½	11,803	4·38	517·11	300	325
				Somerville Daphne 2nd ..	Jr. 2 yrs.	Vol. 16	5.10.28	273	28	8,649	5·00	432·42	200	
W. T. Jephson, Gelliondale	2	2	Jersey ..	Blackwood Valley Dahlia ..	Jr. 3 yrs.	24252	14·10·28	273	5½	4,772	5·31	253·16	250	
				Blackwood Valley Blue Bell's Buttercup	Sr. 3 yrs.	24411	19.10.28	273	17	7,370	5·97	440·12	275	
G. A. Kent, Archie's Creek	4	2	Ayrshire	Woolamai Mildred	Jr. 3 yrs.	14997	19.10.28	273	15	8,406	3·67	308·60	250	234
				Pearl of Woolamai Park ..	Sr. 3 yrs.	13753	17.11.28	273	8	6,302	4·62	291·26	275	226, 298
				Woolamai Rose	Jr. 3 yrs.	15000	12.12.28	273	..	5,534	4·11	227·67	250	195
				Dulcie of Woolamai Park ..	Mature	12355	19.12.28	240	4	6,810	4.09	278.23	350	248, 257, 210
H. W. King, Gormandale	1	1	Jersey ..	Honey Bee of Rosehill ..	Mature	14847	11.10.28	273	12½	7,231	5·79	418·65	350	378, 381
T. Knowles, Dandenong	4	2	Ayrshire	Fernhill Rosina	Sr. 2 yrs.	16032	13.10.28	273	16	9,005	4·57	411·32	225	248
				Dandy Creamy Princess ..	Jr. 3 yrs.	15028	20.10.28	273	5	5,736	3·72	213·50	250	209
				Fanny of Rosstrevor ..	Jr. 4 yrs.	13349	13.12.28	273	12½	9,867	3·92	387·02	300	263, 297
				Rosebud of Fernhill ..	Mature	10453	18.12.28	273	5	5,468	3·85	210·58	300	274
Messrs. Koenig Bros., Mooroopna North	2	2	Ayrshire	Oakbank Peeress	Jr. 2 yrs.	18763	7.10.28	273	19½	7,320	3·78	276·66	200	
				Oakbank Quince	Mature	15284	19.10.28	273	23½	10,071	3·85	388·20	350	
P. H. Lawrence, Tarrawarra	2	..	Jersey ..	Choirmaster's Queen of Rainga	Mature	12954	28.10.28	273	11½	5,660	5·51	311·98	350	242, 228, 252
				Rainga Princess Progress ..	Mature	15533	3.11.28	273	16½	6,188	5·31	328·88	350	244

Standard Herd Records—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
Mrs. E. M. Lennie, Tongala	4	3	Jersey ..	The Valley Dahlia 2nd ..	Sr. 2 yrs.	23256	15.10.28	273	8	6,041	5·70	344·59	225	248
				Linda 4th of the Valley ..	Mature	17776	10.11.28	240	4	6,570	3·90	256·12	350	277, 313, 281
				Poppy 2nd of Hill Crest ..	Mature	17778	22.11.28	273	15	5,858	6·59	385·85	350	424, 414
				The Valley Myra 5th ..	Jr. 2 yrs.	Vol. 16	19.12.28	273	10	4,478	6·67	298·77	200	
Leongatha High School, Leongatha	2	2	Jersey ..	Woorayl Astra 2nd	Jr. 2 yrs.	Vol. 16	4.10.28	273	7	3,410	6·27	213·83	200	
				Moana of Woorayl	Jr. 4 yrs.	17673	26.11.28	273	14	6,089	5·21	317·53	300	238, 203
Longerenong College, Dooen	4	2	Ayrshire	Longerenong Venus ..	Sr. 2 yrs.	16435	6.10.28	273	16½	5,870	4·18	245·23	225	185
				Dolichos of Longerenong ..	Mature	9789	8.10.28	210	4	5,265	3·75	197·65	350	244, 324, 258, 287, 282
				Longerenong Melody ..	Sr. 3 yrs.	15049	16.10.28	273	..	4,797	4·75	227·75	275	214
				Longerenong Stella ..	Sr. 2 yrs.	16434	22.10.28	273	8½	5,759	4·88	280·99	225	174
Mrs. L. Lowing, Tongala	4	4	Jersey ..	Nellie of Jersey Vale ..	Sr. 3 yrs.	21543	28.9.28	273	15	6,579	5·15	338·88	275	226, 242
				Rose Petal of Tarnpirr ..	Mature	9254	4.10.28	273	19	7,503	5·88	440·92	350	375
				Eclipse's Tiny of Meadow Vale	Mature	15613	16.11.28	263*	..	8,253	5·99	494·16	350	
				Troed-Yr-Rhin-Tawelwych ..	Jr. 2 yrs.	Vol. 16	3.12.28	273	25½	8,721	4·95	431·75	200	
C. G. Lyon, Heidelberg	7	7	Jersey ..	Molly 19th of Banyule ..	Jr. 4 yrs.	16692	5.10.28	273	24½	8,204	5·22	428·53	300	337, 338
				Silvermine 24th of Banyule ..	Mature	11601	6.10.28	273	22½	7,676	4·98	382·00	350	299, 406, 426, 340
				Ettie 8th of Banyule ..	Mature	14182	13.10.28	273	20½	7,778	5·63	437·77	350	386, 476
				Silver May of Banyule ..	Jr. 4 yrs.	16693	19.10.28	273	20½	7,067	5·16	364·86	300	377
				Molly 23rd of Banyule ..	Jr. 2 yrs.	21432	1.12.28	273	16	5,784	4·89	282·80	200	
				Banyule Silvermine 43rd ..	Jr. 2 yrs.	21436	8.12.28	273	18½	5,918	5·30	313·62	200	
				Molly 21st of Banyule ..	Jr. 3 yrs.	18808	9.12.28	273	18	6,474	4·93	318·86	250	350

* Dead.

STANDARD HERD RECORDS—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
C. W. W. Macauley, Rochester	4	4	Jersey ..	Taranah Honeysuckle ..	Jr. 2 yrs.	Vol. 16	27.9.28	273	9½	5,075	6·32	320·82	200	
				Taranah Royal Rose ..	Jr. 2 yrs.	Vol. 16	10.10.28	273	14½	6,197	5·38	333·25	200	
				Flower of Taranah	Mature	16717	8.11.28	273	14	7,377	5·36	395·26	350	425, 301
				Taranah Roseleaf	Sr 4 yrs.	23293	22.11.28	273	12½	6,033	6·32	381·17	325	292, 357
J. McDougall, Byaduk	4	4	Jersey ..	Bonnie Jean of Parkview ..	Jr. 3 yrs.	21451	27.9.28	273	14	7,638	4·91	375·07	250	290
				Parkview Fairy	Jr. 2 yrs.	24478	28.9.28	273	15	5,846	4·85	283·74	200	
				Parkview Thora	Jr. 2 yrs.	24481	2.10.28	273	12½	4,986	5·48	273·04	200	
				Laurel of Parkview ..	Mature	15544	15.10.28	273	19½	7,442	5·42	403·12	350	353, 405, 383
P. C. McHutchinson, Paschendale	1	1	Jersey ..	Countess of Gnarbrook ..	Jr. 2 yrs.	24417	18.11.28	210*	15	4,035	5·09	205·18	200	
G. A. McNabb and Son, Irrewillipe East	2	2	Jersey ..	Boorene Silver Lady ..	Jr. 2 yrs.	Vol. 16	14.11.28	273	24½	6,221	4·64	288·41	200	
				Boorene Silvermine's Clara ..	Jr. 3 yrs	Vol. 16	21.11.28	273	19½	6,864	5·31	364·34	250	
Mesdames McWhae and Silvester, Merino	2	2	Guernsey	Wollongbar Parson's Red Rose 44th	Jr. 3 yrs	1383	4.10.28	273	10½	5,429	5·32	289·09	250	297
				Minnamurra Elizabeth ..	Jr. 3 yrs.	1468	8.11.28	273	11	5,178	5·19	268·92	250	276
Messrs. Maher Bros., Seymour	2	1	Ayrshire	Evelyn Satinbird	Jr. 3 yrs.	15077	24.10.28	273	8½	5,496	4·18	229·57	250	
				Evelyn Refrain	Jr. 3 yrs.	15076	23.10.28	273	17½	7,307	4·35	318·09	250	
Dr. Ramsay Mailer, Shepparton	3	2	Jersey ..	Margaret's Favourite of Somerset	Mature	13829	11.10.28	273	9	5,522	5·74	317·01	350	
				Manaroo Margaret's Silvermine Lass	Jr. 2 yrs.	Vol. 16	17.10.28	273	15½	5,786	5·10	295·05	200	
				Manaroo Margaret's Favourite Lass	Jr. 2 yrs.	Vol. 16	19.11.28	273	12	4,116	5·65	232·67	200	

* Withdrawn.

Standard Herd Records—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
A. J. Mapleson, Jindivick	8	8	Jersey ..	Ruby 2nd of Hazeldale ..	Jr. 2 yrs.	Vol. 16	30.9.28	273	13½	6,390	4·60	293·79	200	
				Ruby of Hazeldale	Sr. 4 yrs.	17472	1.10.28	273	13	7,734	5·20	402·39	325	377, 407
				Hazeldale Jessie's Charm ..	Jr. 2 yrs.	Vol. 16	1.10.28	273	12	4,788	6·31	302·17	200	
				Sea Shell of Hazeldale ..	Mature	13758	4.10.28	273	15	7,874	5·87	462·17	350	480, 359
				Hazeldale Bracelet	Jr. 2 yrs.	Vol. 16	10.10.28	273	..	6,089	5·46	332·38	200	
				Jessie's Pride of Hazeldale ..	Jr. 4 yrs.	21496	13.11.28	273	12	7,511	5·79	434·63	300	290, 418
				Opal of Hazeldale	Jr. 4 yrs.	21500	24.11.28	273	12½	6,871	5·33	366·14	300	259
				Hazeldale Rarity 3rd's Charm	Jr. 2 yrs.	Vol. 16	10.12.28	273	13½	5,747	5·84	335·83	200	
R. Masters, Swan Hill	3	2	Ayrshire	Roma of Sunnyside ..	Mature	8062	5.10.28	273	..	9,642	3·73	359·70	350	370
				Meadow Lass of Sunnyside ..	Mature	13005	27.10.28	273	..	11,181	4·05	452·29	350	
				Grand View Tibbie ..	Sr. 2 yrs.	20283	10.11.28	210	4	4,740	3·65	172·95	225	
S. Meadowcroft, Stanhope	1	1	Jersey ..	Invermay Frolic 3rd ..	Jr. 2 yrs.	Vol. 16	4.12.28	273	16	5,067	4·66	235·91	200	
T. Mesley, Dalyston	4	3	Jersey ..	Garenne 5th of Warenda ..	Mature	15557	30.9.28	273	10½	5,217	6·16	321·56	350	385, 437, 346, 394
				Mandoline 2nd of Warenda ..	Jr. 4 yrs.	21515	13.10.28	273	8	6,988	5·49	383·65	300	348, 410
				Warenda Lullaby	Jr. 2 yrs.	Vol. 16	2.12.28	273	16	4,835	4·64	224·12	200	
				Warenda Madrigal 3rd ..	Jr. 2 yrs.	Vol. 16	14.12.28	273	17	6,355	5·44	345·51	200	
Mrs. L. Neyland, Ballarat	2	2	Jersey ..	Garenne 3rd of Bruce Vale ..	Jr. 3 yrs.	Vol. 16	20.10.28	273	12½	6,480	6·28	406·67	250	
				Countess 4th of Bruce Vale ..	Sr. 2 yrs.	Vol. 16	22.10.28	273	13½	6,575	5·85	384·31	225	
T. M. Noble and Son, Maffra	2	2	Jersey ..	Finchley Canary	Jr. 2 yrs.	C.R	30.11.28	273	19	5,651	4·59	259·36	200	
				Music of Bruce Vale ..	Mature	16324	1.12.28	273	16	6,390	5·65	361·01	350	338, 392

Standard Herd Records—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
B. R. O'Meara, Caldermeade	2	2	Ayrshire	Scotswood Model 2nd ..	Jr. 2 yrs.	18926	22.10.28	273	9½	5,912	4·42	261·10	200	
				Scotsville Sylvia Pet ..	Jr. 2 yrs.	18909	23.10.28	273	18	7,385	4·55	336·26	200	
Mrs. L. Orchard, Grahamvale	10	2	Jersey ..	Laura of Jerseyvale ..	Sr. 2 yrs.	24541	2.10.28	273	13½	5,258	5·10	268·26	225	
				Iris of Jerseyvale	Mature	15580	3.10.28	273	4	6,214	5·08	315·43	350	245, 241, 303
				Doris of Jerseyvale ..	Jr. 2 yrs.	24535	12.10.28	273	14½	5,729	5·01	287·07	200	
				Rose of Jerseyvale	Mature	9590	22.10.28	273	14	7,124	4·46	317·71	350	198, 236, 225, 321, 251, 222
				Jerseyvale Lassie	Sr. 3 yrs.	C.R.	26.10.28	273	8½	4,094	5·64	230·82	250	
				Lily of Jerseyvale	Mature	10356	31.10.28	273	13½	6,225	4·20	261·48	350	178, 137, 223, 279, 248, 228, 284
				Snowdrop of Jerseyvale ..	Mature	11659	4.11.28	273	14½	6,176	5·42	334·59	350	164, 285, 302, 257, 302
				Joyce of Jerseyvale ..	Sr. 4 yrs.	19937	12.11.28	273	10½	4,550	5·79	263·64	325	177, 231
				Freezia of Jerseyvale ..	Mature	14226	21.11.28	273	12	6,155	4·73	291·13	350	265, 314, 262
				Pearl of Jerseyvale ..	Mature	15581	2.12.28	273	12½	6,386	4·88	311·47	350	202, 220, 285
I. Padgett, Werribee South	1	1	Friesian	Braemore Sylvia s Echo ..	Jr. 2 yrs.	2679	22.10.28	273	26	10,577	3·22	340·79	200	
W. Parbury, Warburton	4	2	Jersey ..	Rosalind 5th of Brookfield ..	Mature	15589	28.9.28	273	17	7,041	5·83	410·44	350	346
				Beauty 9th of Brookfield ..	Jr. 3 yrs.	21546	10.11.28	273	21½	7,146	4·37	312·54	250	236
				Rosebud 5th of Brookfield ..	Mature	15593	10.11.28	273	14	5,037	4·75	239·31	350	345, 301
				Rosalind 6th of Brookfield ..	Mature	21561	20.11.28	273	10	5,123	5·65	289·56	350	310, 316, 291
J. Pearson, Narrena East	2	2	Jersey ..	Staghorn Fox's Snowdrop 2nd	Jr. 4 yrs.	18909	3.10.28	273	12	6,828	5·07	346·47	300	
				Warrawee Snowdrop ..	Jr. 2 yrs.	24546	25.11.28	273	20	7,320	4·77	349·00	200	
Pettitt Bros., Geelong	3	1	Ayrshire	Blinkbrae Vida 2nd ..	Jr. 3 yrs.	15767	3.10.28	273	16½	6,929	4·23	293·21	250	
				Melba 3rd of Blinkbrae ..	Sr. 3 yrs.	14073	8.10.28	273	10½	4,686	4·87	228·03	275	
				Melba of Woodbyrne ..	Mature	7049	1.11.28	180	4	5,910	3·92	231·50	350	

Standard Herd Records—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
J. Phillips, Murraydale	2	2	Jersey ..	Peri Emperie 3rd ..	Jr. 2 yrs.	Vol. 16	1.10.28	273	..	3,755	5·47	205·36	200	
				Peri Hope's Surprise ..	Sr. 4 yrs.	17819	4.10.28	273	..	8,616	4·20	361·82	325	259, 278
J. Plattfuss, Tongala	10	10	Friesian	Greenvale Mona 2nd ..	Jr. 4 yrs.	App. 3, V. 7	28.9.28	240	4	10,875	3·43	373·53	300	237, 233
				Riverbank Spring Patch ..	Jr. 3 yrs.	2245	26.10.28	273	11½	8,319	4·07	338·78	250	
				Greenvale Dutch Girl ..	Jr. 2 yrs.	2769	10.11.28	273	24½	12,288	3·33	409·66	200	
				Hill View Countess Oakwood	Jr. 3 yrs.	2202	18.11.28	273	11	8,454	3·27	276·49	250	204
				Burnbank Spring Patch ..	Mature	1819	24.11.28	273	12	10,271	3·51	360·71	350	312, 252, 304
				Westmere Oakwood Duchess	Mature	602	4.12.28	273	..	18,891	3·63	686·54	350	352, 319, 638, 703, 817
				Greenvale Dewdrop ..	Jr. 2 yrs.	App. 3, V. 9	12.12.28	273	..	6,401	4·06	260·11	200	
				Glen Elgin Clarice	Mature	2453	14.12.29	273	..	13,606	3·60	489·89	350	488
				Greenvale Oakwood Galatea 2nd	Jr. 2 yrs.	Vol. 10	15.12.28	273	..	7,220	3·36	242·90	200	
				Greenvale Rosie Keys ..	Jr. 2 yrs.	Vol. 10	21.12.28	273	29½	7,854	3·44	269·97	2·0	
Mrs. M. A. Poole, Caldermeade	1	..	Ayrshire	Foliage of Golden Vein ..	Mature	5423	11.12.28	273	9	5,759	4·00	230·56	350	278, 251, 263, 175
R. Poyner, Lilydale	1	1	Jersey	Kyora Foch's Anthem 2nd ..	Jr. 3 yrs.	23405	23.10.28	273	14	6,225	5·09	316·83	250	285
A. P. Prout, Leongatha	2	2	Jersey ..	Dream of Wattle Vale ..	Jr. 2 yrs.	24305	9.10.28	273	18	6,369	4·97	316·67	200	
				Golden Girl of Wattle Vale ..	Jr. 2 yrs.	24307	23.10.28	273	14½	6,266	5·84	365·85	200	
R. Purnell, Moriac	2	..	Jersey ..	Laurie 2nd of Ferntree Vale	Mature	9556	13.10.28	240	4	5,205	4·48	233·22	350	278, 254, 332, 341
				St Alban's Lady Grey 31st ..	Mature	23381	15.10.28	273	12	5,144	5·47	281·38	350	292, 330, 338, 402

STANDARD HERD RECORDS—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lbs.
									lb.	lb.		lb.	lb.	
Messrs. Quigley and Bennett, Yinnar	1	1	Jersey ..	Bluebell of Ellendale ..	Jr. 4 yrs.	18922	16.10.28	273	11	6,003	5·52	331·14	300	308, 317
F. Raggatt, Tongala	1	..	Jersey ..	Aster of Jersey Vale ..	Jr. 4 yrs.	18882	18.11.28	240	4	5,790	4·53	262·50	300	240
Miss H. E. Raleigh, Pakenham Upper	3	3	Jersey ..	Goronga Farm Daffodil Quinta	Jr. 2 yrs.	Vol. 16	5.10.28	273	11	6,462	5·00	323·12	200	
				Goronga Farm Daffodil Chicane	Jr. 2 yrs.	Vol. 16	11.11.28	273	11	4,632	5·68	263·13	200	
				Daffodil 2nd of Goronga Farm	Mature	14235	6.12.28	273	13½	8,042	5·77	463·97	350	284, 285, 441
J. D. Read, Springhurst	1	1	Jersey ..	Springhurst Tamarisk ..	Jr. 2 yrs.	24568	12.12.28	273	22	6,082	5·47	332·89	200	
W. A. Regnier, Poowong	1	..	Friesian	Baromi Belle	Mature	App. 4, V. 5	13.10.28	273	8	7,997	4·26	340·48	350	314, 327
W. S. Richardson, Bacchus Marsh	6	4	Jersey ..	Silvermine 34th of Banyule ..	Sr. 3 yrs.	18813	23.10.28	273	19	6,030	5·79	348·96	275	281
				Sutton Lea Jenny	Sr. 2 yrs.	23394	26.10.28	273	11	3,962	6·68	264·84	225	237
				Golden Pariel 2nd of Boorene	Mature	11227	3.11.28	273	15½	5,205	6·41	333·42	350	295, 376, 320, 295
				Butter Queen 3rd of St. Albans	Jr. 4 yrs.	21371	8.11.28	273	20	5,574	5·69	317·19	300	289, 334
				Milkmaid 3rd of Banyule ..	Mature	11593	18.11.28	273	7½	6,200	4·65	288·36	350	217, 356, 337
				Sutton Lea Patricia ..	Jr. 2 yrs.	Vol. 16	14.12.28	273	13½	5,031	5·66	284·90	200	
W. P. Rogen, Tatura	5	5	Jersey ..	Ditny of Clarendon Eyre ..	Mature	11651	2.10.28	273	13	8,250	4·90	404·01	350	284, 350, 361
				Kantara's Ditny's Desire ..	Jr. 3 yrs.	21626	10.10.28	273	12	7,666	5·02	385·01	250	
				Kantara Muscatel	Sr. 3 yrs.	23409	27.11.28	273	17	8,094	5·48	443·72	275	
				Werribee Starbright 10th ..	Jr. 3 yrs.	21629	15.12.28	273	24½	6,959	5·71	397·28	250	
				Kantara's Pride	Jr. 4 yrs.	18950	20.12.28	273	15½	6,083	6·22	378·10	300	

STANDARD HERD RECORDS—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
G. Rowe, Kardella	9	1	Jersey ..	Winnie of Welbourne ..	Mature	13235	27.9.28	273	7½	4,716	4·64	219.00	350	171, 240, 230, 285, 267
				Jessie's Daisy of Welbourne	Mature	17483	9.10.28	273	6	5,121	4·35	222·93	350	205, 226, 249
				Pretty Pansy of Welbourne ..	Mature	13386	12.10.28	273	7½	4,936	5·66	279·45	350	220, 286, 264, 247, 273
				Handsome Pansy of Welbourne	Mature	17829	17.10.28	273	10½	6,557	4·57	299·49	350	262, 326, 325
				Welbourne Jessie 42nd Clara	Jr. 2 yrs.	Vol. 16	20.10.28	273	6	4,248	5·01	212·78	200	
				Spotlight of Welbourne ..	Jr. 3 yrs.	23422	16.11.28	273	4	3,884	5·45	211·69	250	171
				Welbourne Broken Pansy ..	Jr. 2 yrs.	C.R.	15.12.28	273	10	4,289	4·30	184·44	200	
				Joy of Hill Crest	Mature	10468	21.12.28	273	5½	3,572	4·83	172·36	350	205, 222, 207, 264, 246, 252, 238
				Trixie of Welbourne ..	Jr. 4 yrs.	21638	26.12.28	273	8	3,594	5·65	202·94	300	221, 213
C. M. Runciman, Murraydale	1	..	Jersey ..	Canary 7th of Goulburn ..	Jr. 4 yrs.	19870	17.12.28	273	13	4,459	6.41	285·84	300	246, 232
D. M. Ryan, Pirron Yallock	2	1	Illawarra Milking Shorthorn	Mavis 2nd of the Pines ..	Jr. 3 yrs.	10124	29.9.28	240	4	8,175	3·70	302·31	250	
				Rosecleaf of Alne Bank ..	Sr. 3 yrs.	10105	17.11.28	240	4	5,730	4·01	229·53	275	
R. W. Sadler, Noorat	2	..	Ayrshire	Alice of Roseleigh	Mature	12104	6.11.28	240	4	7,185	3·82	274·31	350	305, 410
				Oakbank Bluff	Jr. 4 yrs.	15214	18.11.28	273	17	6,241	4·13	257·49	300	
W. A. Sandles, Mt. Best, via Toora	8	5	Jersey ..	Sylvia of Franklin Park ..	Mature	14262	28.9.28	273	8	5,279	5·28	278·99	350	252, 285, 273
				Rose's Princess of Franklin Park	Sr. 3 yrs.	18961	5.10.28	273	7	4,400	5·80	255·04	275	174, 226
				Molly of Franklin Park ..	Jr. 2 yrs.	24592	7.10.28	273	10	4,715	5·56	262·25	200	
				Poppy of Franklin Park ..	Jr. 2 yrs.	24594	19.10.28	273	12	4,793	5·02	240·56	200	
				Greta of Franklin Park ..	Sr. 2 yrs.	21647	6.11.28	273	5½	2,837	5·70	161·81	225	
				Queenie of Franklin Park ..	Sr. 4 yrs.	16750	19.11.28	273	10½	7,233	5·03	363·53	325	256, 254
				Primrose of Franklin Park ..	Mature	16749	24.11.28	273	13	6,552	5·40	353·66	350	266
				Lady Betsy's Tottie of Franklin Park	Sr. 3 yrs.	18959	20.12.28	273	13½	6,228	5·08	316·53	275	251

STANDARD HERD RECORDS—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
The Salesian College, Sunbury	2	..	Ayrshire	Linda of Medburn Grove ..	Mature	8303	2.12.28	273	22	8,676	3·58	310·68	350	284, 355, 394, 406, 318, 209, 351
				Thelma of Roseleigh ..	Mature	12111	2.12.28	273	10½	7,900	4·23	334·21	350	295, 308, 370, 300
A. H. Schier, Kernot	7	3	Ayrshire	Scotswood Nancy	Jr. 2 yrs.	18929	8.10.28	273	12	6,311	4.10	258·56	200	
				Scotswood Maude	Jr. 2 yrs.	18924	22.10.28	273	10½	5,796	4·16	240·90	200	
				Scotswood Virtue	Jr. 3 yrs.	16631	30.10.28	273	7	6,005	3·67	220·40	250	174
				Oakbank Gwendoline ..	Mature	15243	12·11·28	273	10½	5,926	3·86	228·47	350	
				Scotswood Joybell	Jr. 2 yrs.	18918	9.12.28	273	16	6,155	4·67	287·66	200	
				Scotswood Melody	Jr. 3 yrs.	16621	12.12.28	273	12½	4,095	4·73	193·78	250	177
				Oakbank Zeta	Mature	15336	27.12.28	240	11	4,210	4·19	176·24	350	
H. A. Schier, Rochester	8	7	Jersey ..	Preston Roseleaf	Jr. 2 yrs.	Vol. 16	4.10.28	273	15	5,087	4·35	221·04	200	
				Preston Pretty Mite ..	Jr. 2 yrs.	Vol. 16	7.10.28	273	11½	4,976	5·31	263·91	200	
				Green View Pearl	Jr. 3 yrs.	21650	9.10.28	273	11½	8,064	5·70	459·49	250	417
				Preston Rosamond ..	Sr. 2 yrs.	Vol. 16	14.10.28	240	4	5,865	4·35	255·09	225	
				Fairhope Primrose	Sr. 3 yrs.	21400	24.10.28	273	4	7,815	5·34	417·62	275	329
				Jenny Lind 2nd of Taff Vale ..	Mature	17831	8.11.28	273	14	7,853	5·04	395·82	350	352, 349
				Green View Janette ..	Jr. 3 yrs.	21649	29.11.28	273	9	6,083	5·17	314·62	250	356
				Ruby of Taff Vale	Mature	17832	5.12.28	273	17	6,555	4·89	320·26	350	353, 307
A. J. Schlipalius, Kilmany South	2	2	Jersey ..	Melba of Fairbank ..	Jr. 2 yrs.	23433	12.12.28	273	12	4,554	5·53	251·93	200	
				Duchess of Fairbank ..	Jr. 2 yrs.	24596	21.12.28	273	14½	4,422	6·13	270·89	200	
T. J. Scott, Rochester	2	1	Jersey ..	Kyora Starbright	Mature	16308	4.11.28	273	16	6,652	4·67	310·65	350	164, 328, 371, 333
				Preston Lady Capture 2nd ..	Jr. 2 yrs.	Vol. 16	16.12.28	273	20	6,930	4·48	310·18	200	

STANDARD HERD RECORDS—*continued*.

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk Last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
E. T. Searle, Edi Upper	1	1	Milking Shorthorn	Geranium 2nd of Grand Pre..	Jr. 3 yrs.	..	8.12.28	273	16½	6,363	4·15	264·25	250	
Simpson and Son, Ferntree Gully	7	5	Jersey ..	Brolga of Aberdour.. ..	Jr. 3 yrs.	21664	22.10.28	273	16½	6,290	5·53	347·99	250	349
				Wompini Gaiety Girl ..	Jr. 2 yrs.	Vol. 16	2.11.28	273	12	6,140	5·09	312·70	200	
				Lady Grey 26th of St. Albans	Mature	14162	21.11.28	240	4	7,200	4·57	329·26	350	313, 384, 414, 475
				Wompini Rosalie	Jr. 2 yrs.	24604	24.11.28	273	11	5,613	5·83	327·24	200	
				Wompini Dolores	Jr. 2 yrs.	Vol. 16	27.11.28	273	12½	5,156	5·02	258·89	200	
				Betsy of Aberdour	Jr. 3 yrs.	21663	27.11.28	273	10½	5,660	5·30	300·00	250	281
				Wompini Spice	Jr. 3 yrs.	Vol. 16	22.12.28	273	12	4,479	5·17	231·42	250	
Smith and Sons, Woodend	1	1	Friesian	Halecote Opera Girl ..	Mature	1281	30.9.28	273	55½	20,123	3·34	671·43	350	408, 650, 762
G. and W. Smith, Fish Creek	1	1	Jersey ..	Rydon Petal	Jr. 2 yrs.	24606	16.10.28	273	14½	6,361	5·84	371·37	200	
F. P. Stephens, Tongala	3	3	Jersey ..	Ipomea of Swansea ..	Jr. 4 yrs.	21248	3.10.28	273	30	10,812	6·24	674·45	300	399, 475
				Keepsake Treasure of Swansea	Jr. 2 yrs.	Vol. 16	11.10.28	273	22½	7,050	6·76	476·77	200	
				Aveley Lettie 4th	Jr. 2 yrs.	Vol. 16	26.11.28	273	13	5,453	6·34	345·72	200	
O. J. Syme, Macedon	3	3	Friesian	Bainfield Topsy 13th ..	Mature	6212	16.10.28	273	37	16,868	3·70	624·35	350	593, 624, 635, 508
				Bolobek Salome	Jr. 3 yrs.	2365	2.11.28	273	28	13,142	3·68	483·53	250	446
				Bainfield Netherland Sylvia 2nd	Mature	1455	17.12.28	273	41	15,135	3·31	501·05	350	459, 746, 616
G. Taylor, Caldermeade	3	2	Ayrshire	Alanvale Snowdrop.. ..	Mature	14862	16.10.28	273	5½	7,593	3·93	298·49	350	212
				Eldorado Hilary	Jr. 2 yrs.	17795	2.11.28	273	16½	6,060	4·32	261·53	200	
				Letty of Gleneira	Jr. 2 yrs.	18073	15.11.28	273	8	5,865	3·97	232·55	200	

Standard Herd Records—*continued.*

Owner.	No. Completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
Telford Bros., Kyabram	2	2	Ayrshire	Hyde Park Daphne's Promise	Jr. 2 yrs.	16354	20.10.28	273	11½	6,531	4·51	294·75	200	
				Oakbank Clare	Jr. 3 yrs.	18724	18.12.28	273	19	7,611	3·81	290·16	250	
J. F. Tuckey, Alberton	3	2	Ayrshire	Tregorland Kyloe	Jr. 2 yrs.	19082	3·10.28	240	4	5,010	4·61	230·87	200	
				Tregorland Ilex	Jr. 2 yrs.	19076	5·10·28	273	14	6,938	4·06	281·89	200	
				Tregorland Kristina ..	Jr. 2 yrs.	19081	8.10.28	273	8	6,006	4·68	280·80	200	
J. T. Tweddle, Berwick	4	1	Friesian	Westmere Pontiac Ormsby ..	Mature	1715	15.10.28	273	13	8,258	3·94	324·99	350	275, 198, 255
				Winlaton Queen Sylvia ..	Sr. 2 yrs.	Vol. 10	6.11.28	273	16½	7,440	3·12	232·21	225	
				Burnbank White Posch Triumph	Mature	2396	9.11.28	273	17½	6,456	3·57	230·32	350	
				Burnbank Muller Patch ..	Mature	1817	4.12.28	273	22	8,775	3·67	322·37	350	376, 334, 390, 439
J. T. Tweddle, Clyde	3	..	Friesian	Ashlynn 25th	Mature	1076	2.10.28	240	4	7,800	3·31	258·15	350	292, 252, 330, 325, 297, 225
				Royburn Muller Alcartra ..	Jr. 4 yrs.	1984	23.10.28	240	4	7,635	3·08	235·06	300	192, 268, 212
				Springfield White Posch ..	Mature	566	28.10.28	273	14	8,265	3·76	310·70	350	217, 296, 332, 404, 267
E. J. Vagg, Leongatha	2	2	Jersey ..	Bonnay Mystery Maid ..	Jr. 3 yrs.	23490	19.11.28	273	14	7,062	5·77	407·80	250	344
				Carrie 4th of Queen's Vale ..	Jr. 4 yrs.	21720	27.11.28	273	22	8,085	6·27	507·27	300	301
Mrs. F. E. Vale, Yarram	2	1	Jersey ..	Sunshine 8th of Brookfield ..	Sr. 3 yrs.	18899	18.10.28	273	12½	5,870	4·34	254·60	275	
				Rosalind 15th of Brookfield ..	Sr. 2 yrs.	21566	29.10.28	273	5	6,608	4·39	290·07	225	

STANDARD HERD RECORDS—*continued.*

Owner.	No. Completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yield of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
C. Wade, Camperdown	1	1	Jersey ..	Buttercup of Merivale ..	Jr. 2 yrs.	24636	27.9.28	273	14	5,562	5·81	323·05	200	
D. Wadelton, Loch	4	3	Ayrshire	Gleneira Inez 2nd	Mature	18060	30.9.28	273	4	7,629	3·99	304·21	350	
				Gleneira Scotch Lass ..	Sr. 4 yrs.	16184	30.9.28	273	15½	9,222	4·42	407·26	325	
				Lady McBeth of Gleneira ..	Mature	8442	9.10.28	273	4	10,557	3·41	359·47	350	
				Dalblair Alice	Jr. 2 yrs.	17719	20.10.28	273	7½	6,008	4·37	262·52	200	
C. S. Walker, Swan Hill	4	3	Jersey ..	Boorene Agustus Marie ..	Jr. 2 yrs.	Vol. 16	28.9.28	273	22½	6,915	5·14	355·30	200	
				Warwick Princess Ivy ..	Sr. 2 yrs.	Vol. 16	2.10.28	273	12	6,675	4·79	319·88	225	
				Preston Beauty	Mature	10527	11.11.28	273	18	8,613	3·88	334·50	350	332, 366, 453, 353
				Warwick Princess May ..	Jr. 2 yrs.	Vol. 16	20.11.28	273	12	5,007	5·85	293·02	200	
A. Wallace, Bendigo	1	1	Ayrshire	Victoria of Glen Cooee ..	Mature	9888	8.10.28	210	20½	8,595	4·53	389·10	350	394, 421
Walsh Bros., Lyndhurst	6	2	Red Poll	Korong Lady 7th	Jr. 3 yrs.	2582D	6.11.28	273	11	4,734	4·50	213·17	250	
				Korong Lily 4th	Sr. 2 yrs.	1804C	6.11.28	273	11	5,574	4·40	245·53	225	
				Korong Belle 10th	Jr. 3 yrs.	1802C	8.11.28	273	10	4,694	4·42	207·69	250	
				Korong Rose 16th	Jr. 3 yrs.	1869D	8.11.28	273	11½	5,045	4·16	209·62	250	
				Korong Belle 12th	Jr. 2 yrs.	2492D	12.11.28	273	13	5,496	4·25	233·31	200	
				Korong Beauty 3rd ..	Sr. 4 yrs.	1324D	27.12.28	273	19	6,475	4·39	284·50	325	
High School, Warragul	1	..	Red Poll	Gipps Alsace	Sr. 3 yrs.	1585A	1.11.28	240	4	5,325	4·04	215·32	275	250

STANDARD HERD RECORDS—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test.	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
H Watson, Leongatha	7	5	Jersey	Navel's Duchess of Round Hill	Sr. 3 yrs.	21338	28.9.28	273	8½	6,993	5·75	402·31	275	
				Kathleen 2nd's Duchess of Round Hill	Sr. 3 yrs.	21333	1.10.28	273	7½	6,551	5·78	378·55	275	
				Kathleen's Duchess of Round Hill	Sr. 3 yrs.	21332	4.10.28	273	8	5,555	5·28	293·17	275	
				Kitty 6th's Duchess of Round Hill	Sr. 3 yrs.	21336	8.10.28	273	7	6,800	5·21	353·97	275	
				Kitty 8th's Duchess of Round Hill	Sr. 3 yrs.	21337	28.10.28	273	6½	6,328	5·50	348·27	275	
				Kitty's Duchess of Round Hill	Jr. 4 yrs.	21334	29.10.28	273	6½	5,394	5·47	295·16	300	
				Kitty 7th of Round Hill ..	Mature	19877	2.11.28	273	6	6,369	5·42	344·90	350	
H. Webb, Sunbury	5	2	Ayrshire	Holly Green Actress ..	Jr. 3 yrs.	15625	30.9.28	273	6	6,821	3·63	247·72	250	229
				Norma of Holly Green ..	Sr. 3 yrs.	14279	20.10.28	273	5	6,061	4·34	262·79	275	276
				Lily's Queen of Holly Green	Mature	11495	20.11.28	240	4	8,490	3·88	329·35	350	252, 404, 388, 341, 331, 410
				Holly Green Fancy ..	Jr. 3 yrs.	15627	26.11.28	273	7½	6,873	3·86	265·41	250	195
				Model of Holly Green ..	Mature	6953	20.12.28	273	25	9,014	4·23	380·85	350	307, 333, 375, 360, 382
W. O. Westlake, Portland	3	3	Jersey ..	Goldfinch 2nd of Grangelea ..	Mature	14129	6.10.28	273	14½	7,168	5·02	359·97	350	266, 396, 438, 451
				Rance of Cloverfield ..	Jr. 4 yrs.	21741	24.11.28	273	18	7,199	5·07	364·83	300	358
				Pansy of Grangelea	Jr. 4 yrs.	18649	11.12.28	273	8	7,013	4·64	325·51	300	347, 343
A. W. White, Echuca	2	1	Milking Shorthorn	Gem 11th of Darbalara ..	Mature	Vol. 6, M.S.H.B. ..	11.11.28	273	18½	7,785	4·36	339·20	350	
				Gem 1st of Warparrilla Estate	Mature		15.11.28	273	20	9,049	4·28	387·25	350	
R. S. Williams, Kongwak	1	1	Jersey ..	Linga Longa Cloudy 2nd ..	Jr. 2 yrs.	Vol. 16	5.11.28	273	8	4,572	6·38	291·70	200	

Standard Herd Records—*continued.*

Owner.	No. completed Test.	No. Certificated.	Breed.	Name of Cow.	Age Standard.	Herd Book No.	Date of Calving.	Days in Test	Milk last Day of Test.	Milk.	Average Test.	Butter Fat.	Standard required.	Previous Yields of Butter Fat in lb.
									lb.	lb.		lb.	lb.	
F. C. Willis, Paschendale	8	2	Jersey ..	Molly's Princess of Clover Flat	Mature	9783	30.10.28	273	13	4,242	4·99	211·68	350	
				Onyx of Murndale	Mature	16768	4.11.28	273	12	5,316	4·53	240·82	350	
				Countess of Murndale ..	Mature	9778	5.11.28	273	19	6,627	4·55	301·52	350	
				Fortune Teller of Murndale..	Jr. 4 yrs.	21756	5.11.28	273	16	5,800	5·10	295·82	300	
				Tourmaline of Murndale ..	Mature	19025	6.11.28	273	18	7,496	4·54	339·89	350	
				Brilliant of Murndale ..	Jr. 4 yrs.	21755	7.11.28	273	21½	7,325	4·25	311·18	300	
				Cloverleaf Princess of Clover Flat	Mature	9777	13.11.28	273	18½	7,484	3·90	292·15	350	
				Starfinch of Carney Dell ..	Jr. 2 yrs.	Vol. 16	7.12.28	273	14½	4,557	4·93	224·64	200	
J. V. M. Wood, Heidelberg	9	9	Jersey ..	Werribee Fancy Madeira ..	Sr. 4 yrs.	17715	12.10.28	273	24½	9,297	5·50	511·77	325	486
				Woodside Sybil's Cunning Mouse	Jr. 3 yrs.	23528	22.10.28	273	18	7,532	4·93	371·61	250	266
				Clarendon Eyre V.C's. Alfalfa	Sr. 2 yrs.	Vol. 16	30.10.28	273	19	5,725	5·51	315·73	225	
				Clarendon Eyre Aunt Chloe..	Jr. 2 yrs.	24671	11.11.28	273	18½	5,652	5·13	290.16	200	
				Clarendon Eyre The Dairymaid	Jr. 2 yrs.	C.R.	14.11.28	273	16	5,357	5·78	309·58	200	
				Clarendon Eyre Marguerite ..	Jr. 2 yrs.	Vol. 16	17.11.28	273	18	5,479	5·31	291·02	200	
				Clarendon Eyre Little Buttercup	Jr. 2 yrs.	24675	1.12.28	273	20	5,765	5·77	332·89	200	
				Araluen Margot	Sr. 3 yrs.	21770	10.12.28	273	17½	5,994	4·93	295·60	275	318
				Aberdour Ranee	Sr. 3 yrs.	23519	25.12.28	273	23	6,906	6·44	444·78	275	324
W. Woodmason, Oakleigh	8	7	Jersey ..	Melrose Vanilla 25th ..	Sr. 2 yrs.	Vol. 16	27.9.28	273	13½	6,248	5·92	369·71	225	251
				Melrose Gaiety Girl 16th ..	Jr. 2 yrs.	Vol. 16	4.10.28	273	10	5,303	5·61	297·60	200	
				Gaiety Girl 15th of Melrose ..	Mature	16786	5·10.28	273	13½	6,474	5·75	371·97	350	217, 290, 264, 371
				Melrose Jessie 48th ..	Jr. 2 yrs.	Vol. 16	26.10.28	273	9	3,795	5·55	210·45	200	
				Jenny Lind 20th of Melrose ..	Mature	17514	26.10.28	273	9½	5,373	5·49	294·91	350	212, 275, 313
				Melrose Jessie 49th ..	Jr. 2 yrs.	Vol. 16	16.11.28	273	11½	4,355	5·22	227·42	200	
				Jessie 43rd of Melrose ..	Mature	19036	1.12.28	273	15	6,225	6·10	379·45	350	298, 361, 368
				Melrose Graceful Duchess 44th	Jr 2 yrs.	Vol. 16	5.12.28	273	13	4,008	5·86	234·86	200	

ORCHARD AND GARDEN NOTES.

E. E. Pescott, F.L.S., Pomologist.

The Orchard.

As a preventive against codlin moth, apple and pear trees should be sprayed with arsenate of lead whenever there is danger from the prevalence of the moth. One of the secrets of success in codlin moth spraying is the destruction of as many as possible of the insects of the first brood. Thus, if particular care is given to the early sprayings, keeping the fruit covered with spray for a month or six weeks after setting, this result is easily accomplished. Some growers prefer to gather all fruit infected by the first brood, spraying only for the second and later broods. Even if all the fruits attacked are gathered, which very rarely happens, the grower suffers from the loss of fruit, which he can ill afford, unless his crop be a heavy one.

Another feature for consideration is the fact that the presence of any arsenical spray combined with a white oil on the foliage is responsible for the destruction of the pear and cherry slug, root-borer beetle, and all forms of leaf-eating insects.

Spraying the cherries for the slug will now be necessary. Arsenate of lead may be used, provided the fruit is not far advanced. Hellebore, and also tobacco water, are effective against this pest.

Cultivation.

All orchard soils should be kept well worked during the summer months. It is very essential that the trees should have an abundant supply of moisture during the whole of the growing season. This will mean an increased supply of fruit buds for the next season, consequently the frequent summer cultivation of the soil will be a necessity if the health and vigour of the trees are to be maintained.

Excessive transpiration is often the cause of loss of young trees and of new grafts. They are found to part with a large amount of moisture, and are not able to obtain or retain sufficient for their nourishment; they then very soon wither and die. The soil around these should always be kept well stirred; they may also be given a good straw or grass mulching, and an occasional overhead sprinkling will greatly benefit them.

The planting out of citrus trees may be continued, sheltering the tender plants from winds with hessian or breaks of scrub.

The general aims in summer cultivation should be to maintain a good loose earth mulch during the whole season, and to keep down all weeds and useless orchard growths.

Pruning.

Summer pruning may now be commenced, particularly on apple, pear, and plum trees. The removal or reduction of surplus leader growths, the shortening of unduly long laterals, and the thinning out of crowded shoots, will all tend to strengthen other parts of the tree and to increase the development of new fruit buds.

The Vegetable Garden.

Tomatoes will require much attention at this time of the year. If the plants have been well looked after, they should be making vigorous growth. It will be to advantage to tie the plants to stakes, training them to two or three main growths, and pinching out all laterals as they come.

The plants should be well watered, and occasionally a handful of bonedust or potash mixed should be forked in around the roots. Where stable manure is used, it should be used as a mulch, forking it in every three or four weeks, and making a fresh mulch each time.

It is now recommended that occasional doses of sulphate of potash as a manure for tomatoes will help the plants to resist the spotted wilt.

All plants of the cucumber and melon family should now be constantly supplied with ample water. Pinch out unnecessary lateral growths, and also the terminals.

The following seeds may now be sown:—French beans, cabbage and cauliflower for winter crops, parsnip, lettuce, celery, and turnips.

The side shoots of celery plants should be removed, afterwards earthing up the plants. Asparagus beds should be top-dressed, and allowed to grow without any more cutting. The vegetable beds will need frequent forking and hoeing to keep the soil sweet, and to keep down all weeds.

The Flower Garden.

Plant out dahlias this month; green plants early, and plants grown from tubers later in the month. Water well at planting, and keep well cultivated afterwards.

Rose bushes and beds may be given a good mulch with light stable manure, straw, grass, or lawn clippings. The beds should be kept rather dry, so as to allow the plants to rest before the autumn period of growth.

Sow seeds of cosmos, asters, zinnia, balsams, cockscomb, coreopsis, salpiglossis, and other late summer and autumn blooming annuals.

Cut down delphiniums that have yielded their first crop of flowers, so as to allow a succession of flowers to come.

Daffodil, hyacinth, tulip, ranunculus, anemone, and other bulbs and tubers may be taken up and stored; while gladioli corms may still be planted.

The garden must be kept well watered and cultivated, so as to tide the plants over the hot and dry season.

REMINDERS FOR JANUARY.

LIVE STOCK.

Cattle.—In most districts the class of pasture available in January is, of itself, altogether inadequate for a dairy cow's needs. Till green crops become available supplementation with both roughage and concentrate will probably be necessary. Obviously, what is called for is a fodder as green, as palatable, and as nutritious as grass, which can likewise be grazed to eliminate labour cost. Young

Japanese millet meets all these requirements, and where it has attained to 5 or 6 inches high the cows may be turned on. Soudan grass has the same advantages. Neither graze these crops too closely nor let the plants get away into the seed-stalk. Failing some leguminous material, to make up for the lime deficiencies of the crops mentioned, let each heavy milker at least have about four tablespoons of bone meal a day to lick up in the manger. A little hay is never out of place with soft green feed, and if lucerne or clover hay is available so much the better; young green millet and a legume hay in sufficient quantities should meet all needs, except those of the extremely heavy producers. If the only hay available be oaten, then bone meal should also be given, and in case of the best producers, probably some concentrate also. Holding the yields up is more practicable, and more economical also, than restoring them once they have fallen. The maize crop benefits by a soil scuffling, and where drill-sowing has made this practicable a shallow-set cultivator should be run between the rows after every rain, the object being to conserve the soil-moistures without breaking too many roots. Where practicable, have a well cleaned fallow in waiting for an early sowing of Algerian oats for winter grazing. See that the calves and dairy heifers get their growth requirements (mainly protein) made up to them in the absence of sufficient pasture. Either ensilage or green crops reinforced, if possible, with a legume (either green or a hay) is as good for the calves as it is for their mothers. Crushed oats also is a fine adjunct when pastures fail. Continue to give the little extra care to cream which summer weather entails. See that flies are excluded at all stages of production. Cool the cream from the separator. Stir the cream thoroughly with a properly designed metal stirrer. Either deliver the cream to the factory daily, or store it under conditions ensuring both cleanness and no undue rise in temperature. Take extra care to cleanse and sterilize (with heat) before using the empty return cans which have been out in the sun.

PIGS.—Have pigs where possible on pasture; a mixture of grass—clover makes excellent grazing—reduces the food bill. If styes have to be used, keep clean and dry. Feed troughs must be kept clean and wholesome. Sows suckling young should be well fed to enable them to produce plenty of milk. Watch sows carefully for signs of constipation; the addition of bran to the feed will prevent this. Give young pigs pollard and skim milk in separate trough as soon as they will take it, and keep them fattening from the start to get them off as early as possible. If pigs are lousy, dress with kerosene emulsion or sulphur and lard, rubbing well into crevices of skin; crude oil from a motor car is also effective. Disinfect styes. Plenty of water should be available for them to wallow in in hot weather, also clean water to drink.

The automatic feeder described and illustrated in Bulletin 16 is proving a great success, and should be adopted in connexion with grazing.

SHEEP.—The various breeds of ewes come in season approximately as follows:—Merinoes and comebacks, November and December; crossbreds, January and February; pure British breeds, February and March. These dates will vary with the locality, e.g., in the north of Victoria ewes generally come in season from one month to six weeks earlier than in the south-western districts or in South Gippsland. Be sure that there are ample rams, that is to say, from 2 to 3 per cent. If possible, use 2, 4, or 6-tooth rams. If older rams are used, it is preferable to join them with young ewes, and rams should be in proportion of 3 per cent. Always select rams from a registered flock with width and substance, true to breed, with type and wool qualities pronounced. (Do not use crossbred or mongrel rams. Pure-bred rams will produce better lambs.) If an ample number of rams be available, use the best first and the seconds afterwards. The mating period should not exceed eight weeks. It is well to have fresh rams after the first five weeks. The ewes should be in good condition at mating time, but not too fat. To start the rams working, yard the ewes with the rams for a few nights at the outset of joining. The ewes will come into season much quicker if flushed with good food just before joining the rams.

Breed from only good-fleeced, roomy, and sound-mouthed ewes. Keep in view wool-production as well as a good-shaped carcass. Lamb, mutton, and wool will be amongst the foremost commodities in Australia for some time to come, and with the prices ruling for these products at present, every sheep-owner should make determined efforts to improve his flock. Two-tooth ewes, if well-grown, may be bred from; this particularly applies to crossbreds and pure English sheep; also to the two-tooth ewes of a Merino flock if they are large enough, but they must be well treated throughout.

The second dipping of tick and louse infected sheep should be undertaken during January, but care should be taken not to dip during very hot weather.

Where the grass is dry and hard, all ewes that are hollow and "off their feed" should be given a purgative drench or pill. If weaners are scouring, worm-pill or drench should be given. Grown sheep showing unhealthy discharge should be given a worm drench.

To make a suitable drench, dissolve 8 oz. of bluestone in 4 gallons of water The following doses may be given:—

Adult sheep	2 oz. of solution.
Yearlings	1½ oz. of solution and ½ oz. water.
Six months	1 oz. solution and 1 oz. water.
Lambs	½ oz. solution and 1½ oz. water.

Attend to health of sheep generally. Do not overstock. Ensure an ample fresh-water supply. Healthy well-fed sheep rarely get fly-blown.

Poultry.—It is not profitable to keep fowls for more than two or, perhaps, three years for egg production. The old hens as they stop laying should be culled and marketed.

The sheds vacated by the old hens should be thoroughly cleaned and disinfected, and made ready for the young pullets.

Do not force the pullets too much with animal food; build them up with a good variety of plain food. Avoid overcrowding. Extra room should be provided as the young stock grows.

Prepare for hot weather. See that houses are well ventilated. Keep water vessels in shady spot and ensure a supply of cool, clean water.

Feed plenty of succulent green feed after the grain feed at night.

Eggs should be gathered regularly twice a day, and kept in a cool place before marketing, and should be marketed regularly—twice a week, if possible.

BEE-KEEPING.

January being usually the hottest month of the year, combs may melt down on very hot days in hives made out of cases unless they are in some way shaded during the hottest part of the day. If bags are used, they should be removed again as soon as the hot weather is over, because they afford hiding places for bee moths, spiders, and other enemies of bees.

With factory-made or other hives, the walls, cover, and floor of which are of timber not less than ⅞ inch in thickness, there is no need to provide artificial shade, provided the entrance is of sufficient width and the hive of ample capacity to accommodate the bees. The ordinary entrance, which is 5-16 inch deep and the width of the hive, is generally sufficient. It may, however, be enlarged by raising the hive another ¼ inch or so in front should there be much clustering out of the bees.

Top ventilation should not be given; it is not necessary, and the bees dislike it. Bees control the temperature inside the hive by fanning at the entrance and by moistening the combs with water.

During this and the next month bees generally supersede queens in their third year, or which are failing during the second. Queens are sometimes still quite prolific, but by some means the bees know that they would not live through the coming winter, and that it is necessary to raise a successor while drones are still flying, so that the young queen may not remain unfertilized. The queen-cells, which bees construct when superseding, are few—one or two, rarely more. They are generally built on the face of one of the outer combs, often one containing no other brood—not on the edge of a brood comb, as in the case of swarm cells.

Supersedure queen cells must not be mistaken for swarm cells and destroyed, otherwise the hive may eventually become queenless.

All colonies should be examined to see that each has a laying queen. It sometimes happens that the virgin queen of a swarmed stock is lost on her mating flight, and as there is then no young brood in the hive from which to raise another queen, the colony becomes hopelessly queenless. Therefore, whenever neither young brood nor eggs are seen in a hive, a comb of young brood or eggs from some other colony should be given to the bees. If, on examination a few days later, queen-cells have not been raised, then there is a virgin queen in the hive which may be expected to commence laying within a fortnight at the outside.

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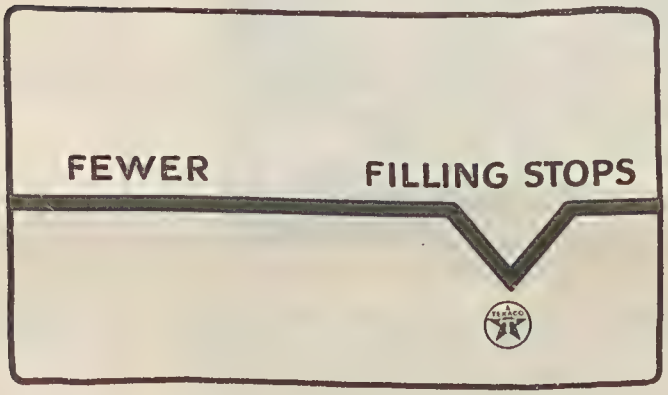

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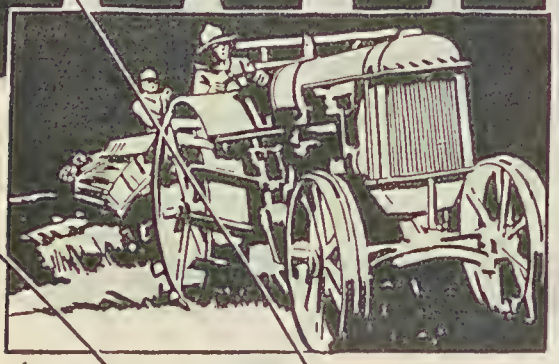

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